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A SUCCESSFUL BOOK WHICH YOU SHOULD HAVE—SUCCESSFUL BECAUSE IT IS A RECORD OF SUCCESSFUL METHODS OF TREATMENT

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THE EARLY DIAGNOSIS AND EARLY CARE OF PULMONARY TUBERCULOSIS

GERALD B. WEBB, M.D.

COLORADO SPRINGS, COLO.

Roentgen examination is the only method available for detecting early pulmonary tuberculosis. A few years ago such a statement would have been considered a heresy, but with the improvement in the technic of the use of x-rays and the taking of serial films it is now recognized that the early lesions of pulmonary tuberculosis are frequently deep seated and discrete.

The explanation must be that the earliest lesions of pulmonary tuberculosis are not likely to be accompanied by symptoms which lead patients to physicians and that the majority of physicians, in their examinations, do not think of tuberculosis and so neglect to send their patients for roentgen examination. Further progress in eradicating tuberculosis depends to a large degree on routine roentgen examinations of all young adults, especially those who have a family history of tuberculosis or who have been exposed to this disease. No patient can be considered as properly examined by a physician today unless roentgenograms of the lungs are taken. Unfortunately, many poor films are taken in this country; technic needs improving, and physicians must learn the correct interpretation.

Fig. 1.—Hilum lesion in a child, aged 6 years, with absence of physical signs and symptoms.

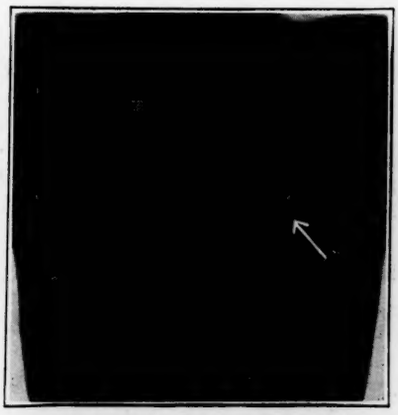

Fig. 2.—Hilum lesion in a child, aged 7 years, extending to base with absence of physical signs but with high fever. Hilum lesions in adults are, according to Leon Bernard, as frequent as apical lesions.

Fig. 3.—Small left infraclavicular lesion in young adult without physical signs or symptoms. Advised to take precautions and to have periodic roentgen examinations.

McPhedran [1] considers tubercle deposits which are found by roentgen examination as "latent" when there are no physical signs or symptoms that can be noted by the physician or patient, and adds that "there can be no sharp line of demarcation between latent and manifest disease."

When râles can be heard in a lung or, as a rule, when hemoptysis or pleurisy or cough has occurred, lesions of pulmonary tuberculosis are advanced.

The early lesions of tuberculosis discovered by roentgen examination are not usually accompanied by marked symptoms of disease.

The question is frequently asked, "Why are there so few early cases of pulmonary tuberculosis in sanatoriums and so many patients with advanced disease?"

In emphasizing the necessity for roentgenographic study for the detection of the earliest lesions of tuberculosis, the well known methods of physical examination must not be neglected. Percussion, palpation and auscultation are still of service in the diagnosis of early clinical tuberculosis.

Percussion of the bases of the lungs by the tips of all fingers (Auenbrugger) is helpful in basal lesions, and in apical lesions ambidextrous percussion [2] should be employed. Change in vocal resonance is best determined by the application of the backs of the fingers to the chest. Trachea deviation,[3] detected by palpation, will frequently direct attention to a diseased lung.

1. McPhedran, F. M.: Am. Rev. Tuberc. **16**: 479 (Oct.) 1927.

2. Webb, G. B.: Ambidextrous Percussion and Palpation, J. A. M. A. **82**: 944 (March 22) 1924.

3. Webb, G. B.; Forster, A. M., and Gilbert, G. B.: Trachea Position, J. A. M. A. **65**: 1017 (Sept. 18) 1915.

Auscultation, to elicit changed type of breathing and also râles, should be practiced over the entire chest, first when the patient is breathing quietly, and then while the patient inhales, exhales and gives one short sharp cough at the end of expiration. Râles are usually heard with the beginning of the next inspiration.

Careful history taking is of the greatest importance. The physician should question his patient regarding exposure and especially family contact, loss of weight, lassitude, sweats, frequent colds, hemoptysis of a drachm or more, pleurisy with or without effusion, cough, hoarseness, nervousness, stomach upsets, menstrual irregularities, rectal abscess and headaches. These are all important questions to be answered.

Specimens of sputum should be submitted to competent laboratories for examination and, if at first negative, a number of specimens should be studied. If the reports are repeatedly negative and roentgenographic evidence is also negative, such diseases as the following should be considered in regard to differential diagnosis: accessory sinus disease with associated bronchitis, hyperthyroidism, intestinal parasites, chronic tonsillitis, aspergillosis, streptothrix and other unusual infections. Pulmonary tuberculosis with an acute onset may be mistaken for typhoid or other fevers.

Chapman [4] made a study of the errors of physicians who had previously examined patients for tuberculosis in about 500 patients coming to Colorado Springs.

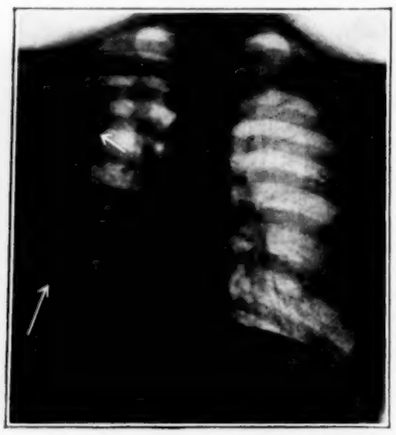

Fig. 4.—Same patient as in figure 3, about six years later, advice having been neglected. Cavity at area of former small lesion, and extensive spread of disease into base of left lung. No symptoms had intervened until a sudden fever led to the taking of this film.

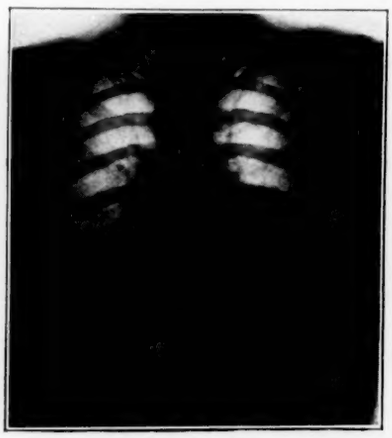

Fig. 5.—Basal lesion in adult of middle age without a previous history of tuberculosis. Physical signs almost absent. Tubercle bacilli in sputum.

Fig. 6.—Young adult with basal lesion almost healed. New process spreading out from hilum without definite physical indications or symptoms.

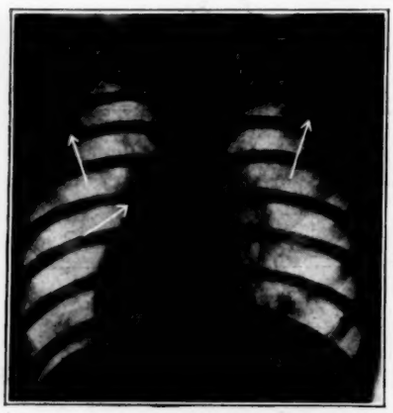

Fig. 7.—Young adult with bilateral apical disease in whom diagnosis was made by roentgenography. A few medium râles were heard above the right clavicle, but the lesion in the left lung did not give rise to any physical signs.

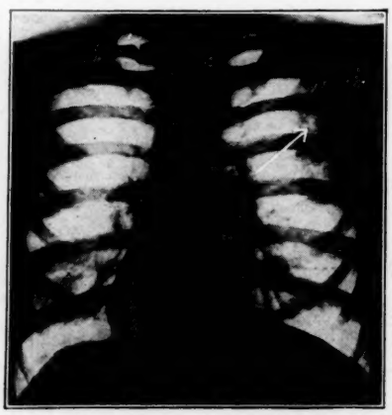

Fig. 8.—Young adult with right infraclavicular lesion, without physical signs.

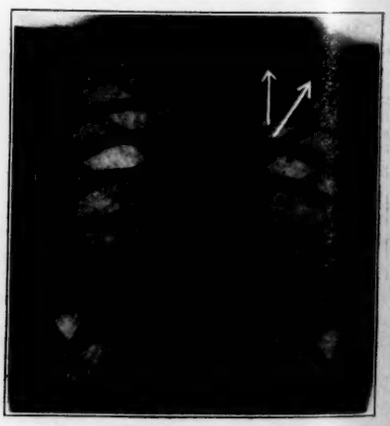

Fig. 9.—Young adult with beginning right apical lesions. Physical signs were absent and there were no symptoms except an occasional rise in temperature to 99 F. A sister had active pulmonary tuberculosis.

The examination of each patient suspected of having tuberculosis should be general and thorough. The ear, larynx, testicles, eyegrounds, anus, abdomen and lymph nodes—especially the cervical—should all be investigated. Tuberculosis of the inner ear and of the choroid is not very infrequent. Intestinal tuberculosis may be present when chest signs are absent.

Suspected patients must be placed at rest for at least ten days while the temperature and pulse are carefully studied. One temperature observation during an office visit is useless.

Two hundred patients met his requirements in their answers to his questionnaire. Chapman summarized his results as follows:

Only two thirds of the cases with definite chest symptoms had been given repeated examinations; only slightly over half the patients had been asked to cough during any of their examinations; less than half had been asked to keep a record of their temperature; only 60 per cent had had their sputum examined when first investigated; only 52 per cent were given at any time the benefit of our newest and most valuable means

4. Chapman, E. N.: Am. Rev. Tuberc. **17**: 307 (April) 1928.

in the detection of early pulmonary tuberculosis, the x-ray; and, finally, half the cases had required more than two months for a diagnosis.

THE EARLY CARE

The diagnosis of pulmonary tuberculosis having been made, the patient should be put to bed for an indefinite period, preferably in a sanatorium in the home state. The sanatorium is necessary for education and, if the patient's sputum is positive, the sanatorium care enforces isolation from the family, especially from children. The development of state and county sanatoriums, with highly trained medical staffs, has been one of the amazing advances in tuberculosis work in the past twenty years. Simultaneously specialists in tuberculosis have conducted the home care well in many of the larger cities.

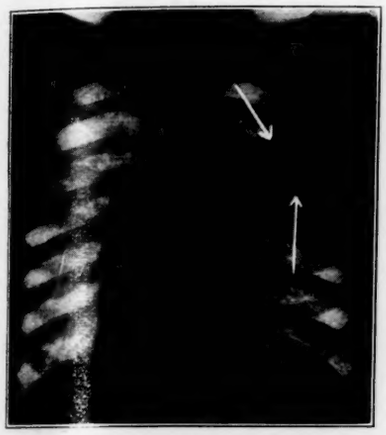

Fig. 1[illegible].—Young adult with right midlung lesion following pulmonary hemorrhage. Physical signs were absent.

Rest of body and mind is the only specific remedy yet available for the arrest and cure of pulmonary tuberculosis. The change from home to sanatorium life brings many of the benefits that formerly accompanied change of climate. Little difference in the results of sanatorium treatment can be noted in the varying climates of the different states.

Climatic resorts, apart from the physiologic benefits resulting from increased actinism and blood changes, have the advantages of sanatoriums and medical skill which can be sought by those who are able to meet the expense of several years' inactivity. Patients without such means should not be directed to climatic resorts.

Physicians attending tuberculous patients must be unusually resourceful in maintaining morale and hope. Patients must continue the rest regimen for many months after all symptoms such as cough and fever have subsided. Pulmonary tuberculosis has a great tendency to relapse. That about 50 per cent of the patients who have had sanatorium treatment die within five years of discharge is a reflection on the thoroughness of the rest regimen. Artificial pneumothorax, phrenectomy and surgical collapse of the lung are not usually matters of early care. These, too, are procedures which only the most competent tuberculosis specialists should pass on. Two or three years of the most careful observation are necessary in all patients with pulmonary tuberculosis, and this includes patients who have had pleurisy with effusion.

402 Burns Building.

Autopsy Versus Necropsy.—Examination of a body after death is designated by three names—autopsy, necropsy and postmortem examination. Autopsy is a rather ridiculous term to keep alive, as it means self-view. Necropsy and postmortem examination are more descriptive as they mean dead view. However, it does not seem as if we shall ever dispose of the word autopsy because of its wide usage.—Hansmann, G. H.: The Application of Pathology to Clinical Problems, *J. Iowa M. Soc.*, May, 1929.

PEPTIC ULCER AND CANCER OF THE STOMACH *

J. SHELTON HORSLEY, M.D.
RICHMOND, VA.

The etiologic relation of peptic ulcer to cancer of the stomach is acknowledged by all pathologists who have studied the subject. There is, however, a great difference of opinion as to the number of cases of cancer of the stomach due to peptic ulcer. The incidence varies from about 2 per cent, estimated by Ewing [1] of New York, to more than 60 per cent by MacCarty [2] of the Mayo Clinic. MacCarty says that, in about 70 per cent of the chronic gastric peptic ulcers, cells can be found that present the cytologic appearance of cancer. Though MacCarty does not state that this percentage of chronic gastric peptic ulcers would eventually become cancer, such a conclusion is suggestive. The opportunities at the Mayo Clinic for examining fresh tissue are great. According to W. J. Mayo,[3] "von Eiselsberg of Vienna reported that 30 per cent of all ulcers of the pyloric end of the stomach which he was able to resect proved to be undergoing cancerous degeneration," and Finsterer reports that "26 per cent of gastric ulcers, in all parts of the stomach, have proved to be undergoing cancerous degeneration."

Cabot and Adie [4] reported five cases out of fifty-six gastric cancers in which there was clear evidence, even according to Professor Warthin (who is inclined to minimize the etiologic relation of peptic ulcer to gastric cancer), that cancer developed secondarily to chronic peptic ulcer.

Scott [5] of the University of Rochester, N. Y., described three cases in which there were symptoms of

Fig. 1.—Section through the base and margin of the gastric ulcer. The top layer of the floor of the ulcer consists largely of small round cells beneath which is connective tissue. On the right are normal gastric glands with areas of leukocytic infiltration. Reduced from a photomicrograph with a magnification of 80 diameters.

gastric peptic ulcer extending over a number of years and which proved to be cancerous. In one of these

* From the Surgical Department of St. Elizabeth's Hospital.

1. Ewing, J.: Ann. Surg. **67**: 715 (June) 1918.
2. MacCarty, W. C.: Surg. Gynec. Obst., May, 1910; Am. J. M. Sc., April, 1915.
3. Mayo, W. J.: Discussion, Tr. Am. Surg. A. **43**: 352-354, 1925.
4. Cabot, Hugh; and Adie, G. C.: Etiology of Cancer of the Stomach, Tr. Am. Surg. A. **43**: 320-351, 1925.
5. Scott, W. J. M.: The Relationship of Carcinoma and Callous Gastric Ulcer, Surg. Gynec. Obst. **46**: 199-212 (Feb.) 1928.

patients with symptoms for twelve years, an adenocarcinoma was in the margin of the ulcer. In two others, carcinoma was found in the base of the ulcer; in one the clinical symptoms of peptic ulcer had existed for five years and in the other for thirty years. In one of these two the free hydrochloric acid was 70 and in the other 52. Scott believes that of all cases clinically diagnosed as chronic gastric ulcer, from 10 to 20 per cent are actually cancerous.

The symptoms of cancer of the stomach are frequently vague and indefinite, particularly when cancer does not follow peptic ulcer. In many cases the progress of the disease is rapid from the first mild symptoms of "indigestion." It is this type of cancer of the stomach that presents great difficulties for early diagnosis. There is no reason, however, why physicians should shut their eyes to the other type, even though it may not represent the majority of the cases in which there is a definite history of symptoms, often resembling those of gastric peptic ulcer, extending over a period of months or years.

Symptoms of gastric peptic ulcer themselves are by no means always clear-cut. Hunger pain is often absent, nor is the relationship of food to the symptoms constant. The intake of food in the larger ulcers usually aggravates the pain. When, however, there is a diagnosis of gastric ulcer and when it does not show

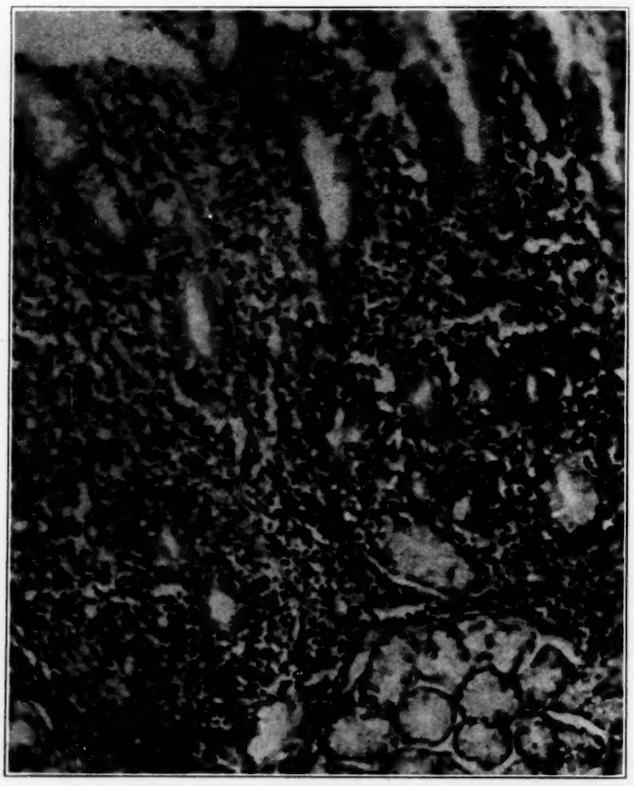

Fig. 2.—Tissue near the gastric ulcer shown in figure 1. Through the transverse center are gastric glands showing evidences of irregularity but not of malignancy. At the top and bottom are normal gastric glands cut at different angles. Reduced from a photomicrograph with a magnification of 160 diameters.

some improvement in clinical symptoms or in healing when examined roentgenologically after a few weeks of careful treatment, it would seem that the patient should be operated on and the ulcer removed, preferably by a partial gastrectomy.

Scott [5] has called attention to the fact that cancerous gastric lesions sometimes appear to heal partially when examined at intervals roentgenologically. This may be due to the contraction of the scirrhous-like tissue around the cancer, while the growth is actually infiltrating farther into the wall of the stomach.

Statistics furnished by the Census Bureau of the United States show that in 1926 cancer of all organs caused 99,833 deaths, while deaths from cancer of the stomach and liver numbered 35,694, of which 19,611

Fig. 3.—Area near the gastric ulcer shown in figure 1. In the section marked off by the square are two acini that present histologic evidence of cancer. These acini are surrounded by gastric glands that appear to be normal in most instances. Some of them, however, are slightly irregular, probably because of reparative processes. Reduced from a photomicrograph with a magnification of 80 diameters.

were in males. When one considers that primary cancer of the liver is uncommon and that cancer of the liver is usually a metastasis from the stomach, pancreas or intestine, it is apparent that cancer originating in the stomach probably accounts for one third of all the deaths from cancer in the United States. If, then, as I think can be conservatively estimated, at least one fifth of the cases of cancer of the stomach arise from peptic ulcer, it would seem advisable to watch patients with gastric peptic ulcer with great care. If removal of so-called precancerous lesions elsewhere in the body is a good policy, this should be eminently a proper procedure in ulcers of the stomach that do not respond readily to competent medical treatment.

The fact that peptic ulcer in the duodenum does not cause cancer is no argument against the etiologic relationship of peptic ulcer and cancer in the stomach. The stomach is tissue that is particularly prone to cancer. In the duodenum, cancer rarely arises. In tissues prone to cancer, as the mouth, lips, the skin of the face, the mammary gland and the cervix uteri, it is well known that an irritation or a small lesion acts as a starting point for cancer. It seems illogical not to recognize such a relationship in the stomach. In some regions of the body, as the palms of the hands and soles of the

feet, irritation does not appear to produce cancer; possibly such tissue has been so stabilized in the evolutionary process that control of its cells has been well established. At any rate, malignant conditions do not tend to arise in these regions. But wherever malignant conditions do tend to arise, irritation is one of the great factors in the causation of cancer.

The following case is interesting because of the relationship between ulcer and cancer:

REPORT OF CASE

Mrs. L. E. H., aged 70, whose height was 65 inches (165 cm.) and weight 120 pounds (54 Kg.), had had "stomach trouble" for about fifteen years, with dull pain in the lower epigastrium at intervals without relation to meals. There was some nausea but no vomiting until a week before admission to the hospital. Recently there had been a slight loss of weight. There was no hematemesis and no melena. A roentgenogram of the stomach taken about a year before admission did not seem to show a lesion. The symptoms, however, continued and within the last few months before examination had been worse. Roentgenologic examination by Dr. L. F. Magruder of Norfolk, Nov. 23, 1928, showed a marked defect in the pyloric end of the stomach. The patient was admitted to St. Elizabeth's Hospital, November 30. Repetition of the roentgenologic examination by Drs. F. M. Hodges and L. O. Snead of Richmond confirmed the observations of Dr. Magruder; there appeared to be almost a complete occlusion of part of the pyloric portion

Fig. 4.—Higher power magnification of the tissue shown blocked out in figure 3. On the right of the two acini is a somewhat irregular gastric gland. Throughout the rest of the section, however, most of the gastric glands appear to be normal. Reduced from a photomicrograph with a magnification of 160.

of the stomach extending from near the left boundary of the pyloric antrum to within the pyloric canal. There was very little free hydrochloric acid in the gastric juice. The patient was given hydrochloric acid for several days before operation. The administration of the hydrochloric acid in these cases, as suggested by Dr. W. H. Higgins of St. Elizabeth's Hospital, undoubtedly decreases the bacterial growth in the stomach by adding an antiseptic that is normally found in the gastric juice.

December 10, I did a partial gastrectomy under local anesthesia, using a modification of the Billroth I method, a description of which I[6] have published elsewhere. The essential features of the operation are that, in order to preserve the axis of peristalsis and to render suturing safer, the lesser curvature of the stomach is united to the upper border of the duodenum, and an incision is made in the anterior wall of the duodenum, flaring it open so that it can be sutured to the stomach without the danger of subsequent contraction and obstruction at the union.

Fig. 5.—Higher magnification of the area in figure 4. The two acini showing cancerous structure are about at the longitudinal center. In the upper one is a bipolar mitotic figure. In the lower acinus is a wreath mitotic figure seen on the edge. In both of these acini the nuclei are very irregular, many of them deeply stained. The cells are irregularly placed. The basement membrane at portions of the acini seems to have disappeared. The cells are in some areas piled up without any order. They present the features of adenocarcinoma. To the right of these acini is an acinus which has some irregular cells, but they are fairly mature, as shown by the lumen, and are probably partly influenced by repair. They could not be called malignant. Reduced from a photomicrograph with a magnification of 275 diameters.

The patient made a satisfactory recovery from the operation and left the hospital, Jan. 3, 1929. Since then she has been in good health.

The specimen consisted of the pyloric portion of the stomach and measured 7 cm. along the lesser curvature and 13 cm. along the greater curvature. On the pyloric end there was a small cuff of duodenum attached. There was a lesion on the lesser curvature toward the posterior wall, about half way between the pyloric and the cardiac ends of the specimen. It infiltrated slightly the surrounding tissues, was oblong and superficially ulcerated, and measured 2 cm. in its longest diameter. It appeared to be an old ulcerated lesion with some inflammatory deposit and a possibility of early malignant growth. The remainder of the specimen of the stomach appeared to be normal. The lesion was not prominent, though it could be well recognized on inspection and palpation of the stomach from without. The extensive roentgenologic defect was obviously due to spasm. It seems probable that when the roentgenologic examination was made a year before there was very little spasm and the lesion, though present, was incon-

6. Horsley, J. S.: Operative Surgery, ed. 3, St. Louis, C. V. Mosby Company, 1928; Partial Gastrectomy, Surg. Gynec. Obst. 44: 214-220 (Feb.) 1927.

spicuous. With an exacerbation of the inflammation around the lesion, the spasm was marked and produced for a time almost complete obstruction.

Histologic examination showed in most of the slides the typical appearance of gastric ulcer. The excavation was not deep. At the base of the ulcer was leukocytic infiltration and connective tissue without any evidence of a malignant condition (fig. 1). At the margins the gastric glands were usually normal; in some places there were hyperplasia and irregularity of the epithelium as though the glands were in the act of repairing (fig. 2). Throughout the sections there were areas of leukocytic infiltration. In one small place in one slide there were two acini that showed the structure of carcinoma. These two acini had the distinctive features of cancer (figs. 2, 4 and 5). There were mitotic figures; the nuclei were irregular, and the cells were irregularly placed. The nuclei in most instances were large and stained well. The basement membrane apparently was not continuous. That the structure of the two acini was cancerous hardly admits of doubt, and yet around them were normal gastric glands. Though serial sections were not made, other blocks from different portions of the ulcer did not show cancer, which was found in only one slide.

COMMENT

It seems improbable that this small cancerous spot had existed for fifteen years during the time of the gastric symptoms. The logical conclusion is that this microscopic area of cancer had recently arisen in the region of the gastric ulcer as a result of the irritation of the ulcer. As the two acini constituted all the definite cancerous tissue found in this case, it is possible that a thorough histologic examination of gastric ulcers may show the incidence of incipient cancer greater than it is generally believed to be.

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INFESTATION OF THE LUNG BY A NEMATODE OF THE GENUS CYATHOSTOMA *

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Pulmonary parasitism of fowls and animals by a nematode of the closely related genera *Cyathostoma* and *Syngamus* is not uncommon. The best known species of these genera is *Syngamus trachealis,* which causes gapeworm disease of domestic pheasants and chickens. This parasite invades the trachea and bronchi and causes a peculiar stretching of the neck accompanied by a yawnlike opening of the beak; sometimes the worms are expelled in a tenacious mass of mucus. If the infestation is extreme, death may be caused by exhaustion or, less often, by asphyxiation.

According to the available literature, infestation of man by *Cyathostoma* has not been reported. A pair of forked worms recovered from the sputum of a woman residing in St. Lucia, West Indies, were figured and described by Leiper [1] as a new species of the genus *Syngamus.* The animal host of this nematode has not been found; furthermore, a report of a second infestation of man by this or a similar parasite has not been placed on record.

The present infestation was probably acquired in the Lanas Province of Mindanao, P. I.

REPORT OF CASE

An outdoor man, aged 33, returned to Manila, P. I., March 8, 1928, from an expedition which had as its objective the climbing of Mount Piapayungan. Three days after his return, an acute attack of bronchitis began a train of symptoms which lasted for a period of five and one-half months.

The further course was marked by prolonged attacks of coughing. The coughing spells usually occurred in the morning on arising, and were relieved only by vomiting or by the production of a tenacious mass of rust colored sputum. A hacking cough was present throughout the day and respiration was often accompanied by an asthmatoid wheeze. Perhaps the most remarkable symptom was the almost nightly development of typical asthmatic attacks.

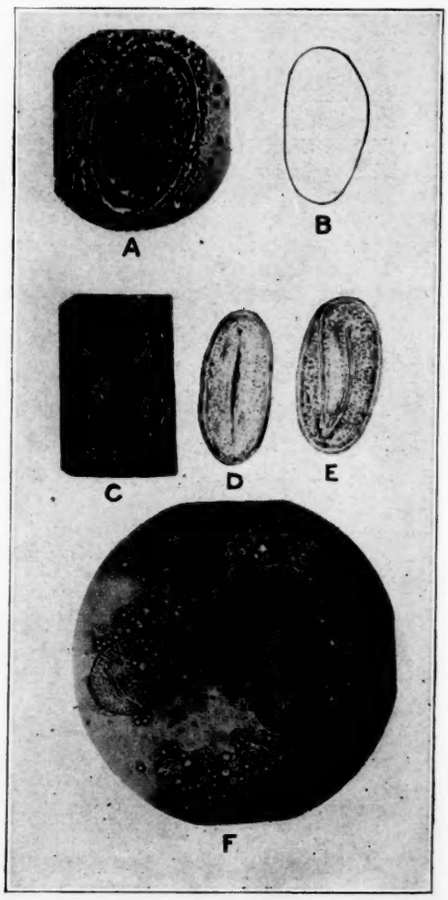

Fig. 1.—*A,* photomicrograph of an ovum in the sputum showing a morula of eight cells; *B,* typical outline of the majority of the ova in the sputum; *C,* photomicrograph of a larva within the case; *D,* and *E,* camera lucida drawings of larvae after the ova had been grown in culture for twelve days; *F,* photomicrograph of a larva after emergence from its case.

About two months after the onset, hemoptysis was first noted. From that time on, small amounts of bright red blood were not infrequently noted in the sputum.

The subjective symptoms were a constant desire to clear the throat, a sense of intense laryngeal tickling, a dull aching pain over the left bronchus, and a feeling of substernal constriction.

Since exercise of any kind resulted in an exacerbation of all symptoms, the patient was obliged to forego all physical recreation. In spite of all these annoying symptoms, there was no fever or loss of weight, and the general physical condition of the patient remained good throughout the period of the infestation.

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* From the U. S. Army Medical Department Research Board, Bureau of Science, Manila, P. I.

1. Leiper, R. T.: Observations on Certain Helminths of Man, Tr. Scot. Trop. Med. & Hyg. **6**: 265, 1913.

Examination of the patient was negative except for the chest. Inspection of the thorax revealed an area in the second intercostal space, 1 inch to the left of the sternum, which appeared to bulge on coughing. Palpation and percussion of this region caused pain and tenderness, but no dulness could be detected. The breath sounds over this area were harsh and bronchial and were interspersed with medium râles. Hence, from the physical examination, a diagnosis of left bronchial infestation was made.

Roentgenograms of the chest and laboratory examinations of the urine and feces were negative. The blood count was normal except for an eosinophilia that varied from 7 to 28 per cent. The sputum was mucopurulent and was often streaked with bright red blood. Many nematode ova were found in the sputum, especially in the firm mucopurulent plugs.

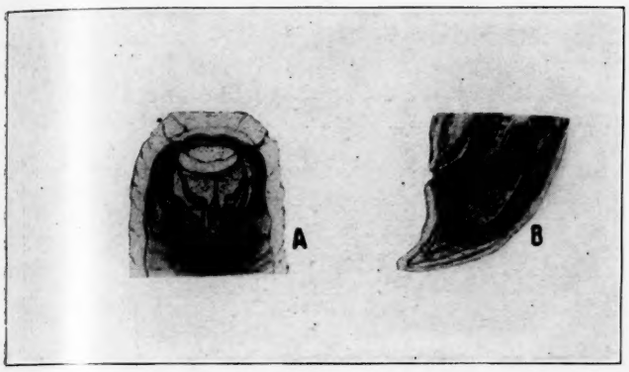

Fig. 2.—*A*, head of the female cyathostoma recovered from the sputum; *B*, tail of the cyathostoma showing position of the anus. All drawings were made with the aid of a camera lucida by Capt. F. H. K. Reynolds, V. C., U. S. Army. Photographs by the Bureau of Science, Manila, P. I.

The treatment recommended was removal of the worms by bronchoscopy, but facilities for this procedure were not readily available. Pending a return of the patient to the United States for bronchoscopy, several forms of treatment were tried, including deep inhalations of vaporized turpentine and tincture of benzoin. Intravenous injections of neoarsphenamine were also administered. No improvement followed any of these medications.

It is worthy of note in passing that an intercurrent attack of dengue fever, which caused a temperature of 104 F., did not modify the symptoms in any way.

Sept. 2, 1928, after a moderate attack of coughing, a bright red female nematode was expelled and the patient's health rapidly returned to normal.

The parasite measured 16.6 mm. in length. The body was curved ventrally and slightly twisted laterally. The diameter at the head end was about 1 mm., while that of the posterior extremity was 0.66 mm.; hence there was a gentle tapering of the body from the head to the tail end.

The specimen was relaxed by shaking in physiologic solution of sodium chloride, and was killed by being dropped in hot 70 per cent alcohol. The worm was then placed in alcohol and glycerin, and after evaporation of the alcohol it was finally mounted in pure glycerin.

An examination of the cleared specimen disclosed the following:

The head was bulbous, with a heavy chitinous wall divided into six equal parts by longitudinal lines. A thin transversely striated outer membrane surrounded the wall. The oral aperture was oval, measured 0.54 mm. in diameter, and was held rigidly open by a heavy chitinous ring. The depth of the oral cavity was 0.36 mm. and contained at its base seven teeth and a fleshy toothlike projection which probably carried a glandular duct.

The vulva was located in the anterior third of the body, 3.52 mm. from the mouth and 13.1 mm. from the tail end. It was slightly protruding. The aperture measured approximately 0.5 mm. in diameter.

The anal aperture was about 0.018 mm. in diameter, while the anal ring measured 0.072 mm. It was approximately 0.8 mm. from the posterior terminus of the specimen (fig. 2*B*).

The posterior extremity was short and conical, and ended rather abruptly in a pointed tail which was curved (figs. 2*B* and 3).

The esophagus was shaped like a club. It measured 3 mm. in length and approximately 0.88 mm. in its greatest width at the bulb.

The ovaries extended to within 1 mm. of the extreme tip. In the posterior fourth they were apparent as two parallel tubes (fig. 3).

The coils of the uterus extended to within 2.6 mm. of the extreme tip.

The ova in the sputum measured, on the average, 60 by 102 microns. They were oval in outline and the great majority were flattened on one side of their length (figs. 1*A* and *B*). The clear, transparent shell measured about 2 microns in width and was faintly striated transversely. An eight cell morula was enclosed by a faintly discernible membrane. An operculum was not found either before or after maturation of the ovum.

It was very difficult to separate the ovum from the tenacious sputum. Many attempts were made to accomplish this, by dilution and sedimentation, by autolysis and sedimentation, by using sugar solutions of high specific gravity, and, finally, by digestion of the sputum with 3 per cent sodium hydroxide for a few hours, followed by neutralization with hydrochloric acid, and several washings. While none of these technics were satisfactory, the sodium hydroxide method gave the best result.

The ova obtained were placed in a shallow layer of water contained in a watch crystal. This was then placed in a dish which also held a little water and the whole protected from insects by a glass funnel inverted over the larger dish.

In the successful cultures, which were only a small percentage of the many attempts, the embryo nematodes formed in two days; in varying periods of from ten to twenty-one days, free larvae could be found. The larvae never left the water in the watch crystal. They measured 33.2 microns in breadth by 548 microns in length. The posterior extremity tapered to a fine point. They were encased in a loose sheath.

An attempt at infestation of a baby Philippine monkey with material containing free larvae and mature ova was unsuccessful. Two domestic ducklings were fed 17 day old cultures without infestation resulting. Further experimental work was prevented by a cessation in the supply of ova.

During the trip into the interior of Mindinao, the patient hunted duck (*Dendrocygna arcuata*) and snipe (*Gallinago megalo* and *G. gallingo*) and a species of woolly black deer

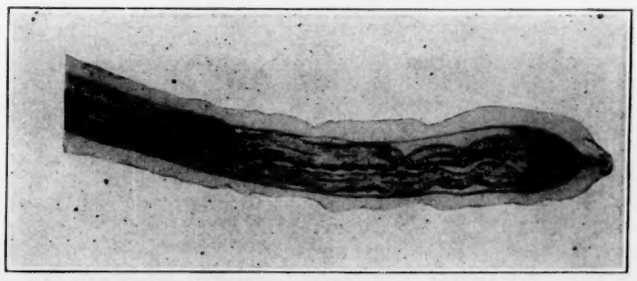

Fig. 3.—Posterior third of the cyathostoma, showing the ovarian coils extending almost to the tip of the specimen. The uterine coils were 2.6 mm. from tip.

which is peculiar to the island. He waded in marshes which were frequented by myriads of birds and animals. Because of certain hardships encountered on the journey, he was often exposed to contamination with the dejecta of birds and animals.

COMMENT

The nematode parasites of the lungs of the birds and animals indigenous to Mindanao, P. I., are practically unknown. The opportunity of tracing the worm of this patient to its usual host has not been presented; furthermore, without a systematic survey, the finding of the normal host would very likely be a chance happening. Hence, rather than delay this report for an indefinite period, it was decided not to wait for

additional data and material in order to make this study more complete.

According to Chapin [2] the sexes in *Syngamus* are permanently joined in copula, while in *Cyathostoma* they are separate; also, the number of teeth present is an additional differential point. In spite of a very careful search of the sputum from which the female specimen here reported was obtained, the male could not be found; certainly they were not joined in copula. The number of teeth found in our specimen was seven. The number of teeth in *Syngamus* is eight or nine, while in *Cyathostoma* the number is six or seven.

The present key to the species of *Cyathostoma* (Chapin) is admittedly unsatisfactory and, furthermore, a male specimen is almost essential for a proper classification of an unknown *Cyathostoma*. Therefore, because the present state of our knowledge of lung worms is unsatisfactory and because we failed to obtain a male specimen, the classification of this parasite cannot be made at this writing. The extraordinarily large size of the ova of this worm suggests strongly that the species in question has never before been placed on record.

AIR-TIGHT INTERCOSTAL DRAINAGE OF ACUTE EMPYEMA*

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That acute empyema is a grave disease requiring expert management is apparent to those who see the disastrous early and late results that often follow the older methods of treatment which were conceived in ignorance of the pathologic anatomy and physiology of the disease.

It takes from one to three weeks from the beginning of the pleural infection for tough adhesions to form between the visceral and parietal pleurae at the limits of the empyemic abscess. If a portion of a rib is resected within this period, air is given access to the pleural cavity and the elastic lung contracts and pulls away from the thoracic walls beyond the limits of the empyema. As a result, the infection that was probably localized to only a portion of the pleural cavity spreads throughout the pleural cavity, and a tremendously large empyema is substituted for a localized, or localizing, one. Further, open drainage by rib resection permits the free ingress and egress of air between the pleural cavity and the room during respiration. As a result the mediastinal structures, as yet unfixed by stiff enough inflammatory exudate, swing pendulum-like from side to side and reduce the respiratory efficiency of the opposite lung to such an extent that death from anoxemia may soon follow; this is especially likely, as Evarts Graham has well shown, if the patient's vital capacity is far below normal owing to impairment of pulmonary and cardiac reserve by acute pneumonic and empyemic infections.

It may be concluded, therefore, that open drainage for acute empyema usually should not be performed during the first one or two weeks of the disease, the exact time being determined by the probable presence of firm pleural adhesions. The thicker the pus, as seen at aspiration, the earlier are firm adhesions likely; in the presence of thin streptococcal pus, firm adhesions may not form for three weeks.

As a large amount of virulent pus in contact with such an actively absorbing surface as the pleura is a menace to the patient's life, obviously the pus should be removed immediately. Until this is done it will increase in amount and enlarge the empyemic cavity that must be obliterated before the patient is well. The longer the pus remains undrained, the greater the chance of its breaking into the lung with dangerous consequences.

Safe removal of the pus during the period when open drainage is unsafe may be accomplished either by repeated needle aspirations at intervals of one, two or more days, or by closed air-tight drainage. Aspirations effect only partial drainage and only rarely a cure, even when combined with instillations of an antiseptic solution. They are often useful during the first days of an acute empyema when the patient's general condition may be so critical that even the slight disturbance caused by air-tight intercostal tube drainage with local anesthesia should be avoided. In this connection it is important to remember that if aspirated empyemic pus, no matter how heavy and ugly and no matter how high the fever, does not show any pyogenic organisms on smear or culture, closed or open tube drainage must not be performed because of the likelihood of the empyema being a pure tuberculous one; tube drainage inevitably results in the superimposition of pyogenic infection.

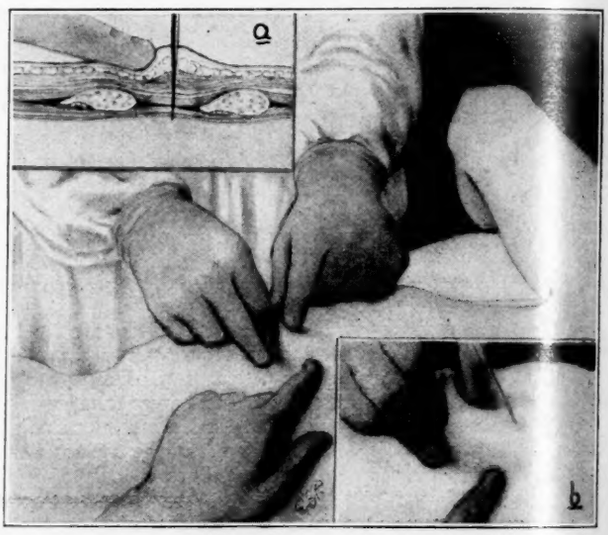

Fig. 1.—Patient lying on "good side" with upper arm abducted. Assistant surgeon marking intercostal space chosen for drainage with left index finger. Surgeon and assistant pushing skin and muscle upward. Insets *a* and *b*, narrow-bladed scalpel passing through elevated tissues and middle of interspace.

The optimum time to perform air-tight intercostal tube drainage is within a few days of the onset of an acute empyema. After massive fibrinopurulent clots have formed in the pleural cavity, the intercostal drainage tube is likely to become repeatedly plugged with them.

Because knowledge of the technic of a satisfactory operation is not widely disseminated, I am presenting here an operation that is well known in principle and original in only a few minor details. It has proved highly satisfactory in practice and is simple in both execution and after-care—a decided advantage over those methods that require elaborate special apparatus.

2. Chapin, E. A.: Review of the Nematode Genera Syngamus Lieb. and Cyathostoma E. Blanc., J. Agr. Research **30**, March 15, 1925.

* From the Department of Surgery, University of Michigan Medical School.

TECHNIC OF OPERATION

Before operation the patient is given morphine or codeine but no atropine. Usually the dyspnea is not so great that he cannot lie on his "good side," but if it is he may sit across the operating table and lean on an attendant. The posterior axillary line is chosen as the drainage site for a typically located empyema. That intercostal space is selected which is over the lower midportion of the empyema, as estimated by physical signs, roentgen rays and confirmatory thoracentesis. The very bottom of the abscess is not sought because here there is undue danger of wounding the diaphragm and because with the air-tight method it is not necessary to obtain absolutely dependent drainage. The assistant surgeon keeps a finger in the selected intercostal space and after all tissues to the parietal pleura have been thoroughly infiltrated with 0.5 per cent apothesine solution, both surgeons push the skin and underlying muscle upward on the ribs and hold them exactly in this position until the incision has been made and the endoscope introduced (figs. 1 and 3). It is obvious that, when the drainage tube has been introduced through the tissues held in this way, the tube will pass obliquely through the thoracic wall from skin to pleura as soon as the skin and muscle are released and return to their normal lower position (fig. 5, inset *a*). This effect may be increased by abducting the patient's arm from the chest before the incision is made. The oblique passage of the tube through the chest wall is responsible for the more or less prolonged maintenance of air-tightness and pus-tightness between the tube and the tissues. Under certain conditions this tightness will be maintained only a few days, but usually for one or two weeks; in several of my cases it was maintained for a month or more.

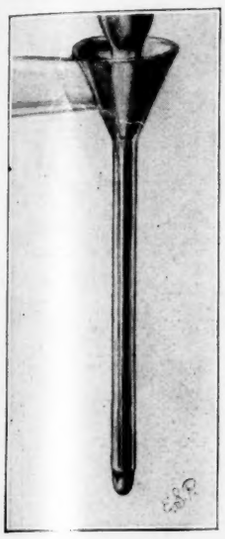

Fig. 1.—Urethral endoscope used to introduce tubes.

With the soft tissues pushed upward as described, a narrow-bladed scalpel (Bard-Parker number 11) is made to pass from the skin just through the parietal pleura in the middle of the intercostal space (fig. 1, insets *a* and *b*); the skin itself is incised only enough to accept snugly the size of endoscope selected for the case. Without letting the skin and muscles change their position in relation to the intercostal space, the surgeon withdraws the scalpel and substitutes a closed hemostat; this is then opened (fig. 3) and withdrawn, thereby enlarging the incision with less danger of hemorrhage than if only the scalpel were used. Immediately after the hemostat is removed, a bullet-nosed endoscope is introduced (fig. 2 and fig. 3, inset *a*) with a twisting motion, care being taken that the instrument does not suddenly overcome the resistance offered by the thoracic wall and plunge into the empyema cavity and injure the diaphragm or lung. This resistance is chiefly due to the narrowness of the intercostal space resulting from the spastic contraction of the intercostal muscles in acute empyema. This spasm may be overcome by steady persistent pressure with the instrument, and it is remarkable that in children as young as 3 or 4 an endoscope with an outside diameter of 11 mm. may be entered between the ribs at the posterior axillary line. This size will accept a rubber tube with an over-all diameter of 10 mm. and an inside diameter of 6 mm.

On withdrawal of the obturator from the endoscope the empyemic pus, which is under pressure, mounts in the instrument and seals the pleural cavity against the entrance of air. The widest rubber tube that the endoscope will accept is fed into the cavity (fig. 3, inset *b*) and its end fixed with a hemostat until the endoscope is removed from the chest, when the rubber tube is grasped at the skin (fig. 4), the endoscope slipped off the extrathoracic portion of the tube, and the end of the tube immediately clamped to prevent the escape of pus or the entrance of air (fig. 5). The tube used should be a stiff-walled one so as to counteract the tendency to its collapse from pressure by the adjacent ribs. A catheter is unsuitable in many cases in that its inside diameter is too small to carry off the fibrinopurulent clots.

It is important to have the inner end of the tube not much more or less than 3 cm. beyond the parietal pleura. If less than 3 cm., the end is in danger of being drawn out of the empyemic cavity during later dressings. Its position can be determined by (1) measuring the total length of the tube before introduction, and (2) estimating the oblique distance between the skin and parietal pleura, to which is added the 3 cm. of the tube that should project into the cavity beyond the parietal pleura. The difference between 1 and 2 represents the length of tube that should always be external to the skin (fig. 5).

As a single intercostal tube is more likely than not to become plugged and fail to evacuate the sedimented pus from the cavity unless provision is made for antiseptic irrigations, it is important always to introduce a second tube for this purpose. It is true that antiseptic solutions can be repeatedly introduced in small amounts through a single drainage tube and evacuated through it, but this is a cumbersome and insufficient method and has the disadvantage that even the small amounts introduced must necessarily break recently formed pleural adhesions that are attempting to bring about closure of the cavity. The second tube should be a small one, such as a Dakin tube. It is introduced

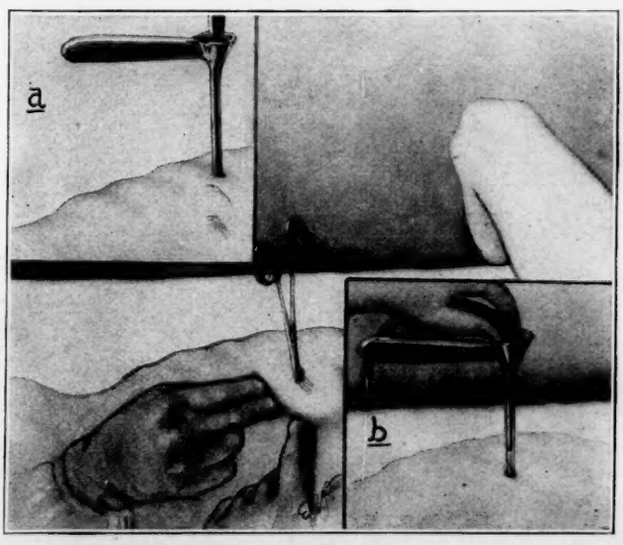

Fig. 3.—Hemostat substituted for scalpel while skin and muscle are still steadily elevated. Inset *a*, endoscope substituted for hemostat; inset *b*, obturator removed and drainage tube being inserted.

through a narrow endoscope in the intercostal space above the drainage tube, exactly the same technic as that already described being used.

Dressings are placed as illustrated in figures 6 and 7. It should be noted that no sutures are used to hold the tubes directly to the skin. The sheet of heavy rubber is pierced with two mattress sutures of silk which are tied around the tubes (fig. 6). The rubber sheet is then firmly anchored to the skin with adhesive straps. The serum-soiled gauze beneath the rubber sheet may be changed every day or two after the adhesive tape has been cut at one or more sides of the rubber sheet, which must not be lifted far from the skin, as this would pull out the tubes.

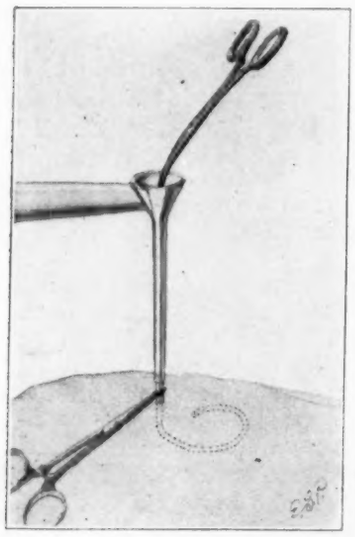

Fig. 4.—Distal end of tube closed and fixed with hemostat until end of endoscope is withdrawn from thoracic wall. The tube is then grasped next to the skin, the distal hemostat removed, and the endoscope entirely removed.

Sudden evacuation of a large amount of pus from an empyema cavity with the coincident sudden change in the position of the mediastinal structures is highly dangerous and in the past was one of the chief causes of postoperative death. Fortunately, this may be avoided by the air-tight method of drainage with gradual decompression, and as a result it is the rule for patients to leave the operating table in no worse condition than they came to it. Only a little pus is evacuated in the operating room—only that which escapes under pressure between the time the obturator of the endoscope is withdrawn and the drainage tube introduced, and that which is washed out when the tube system is being tested at the end of the operation, this amount being replaced, however, by the injected fluid.

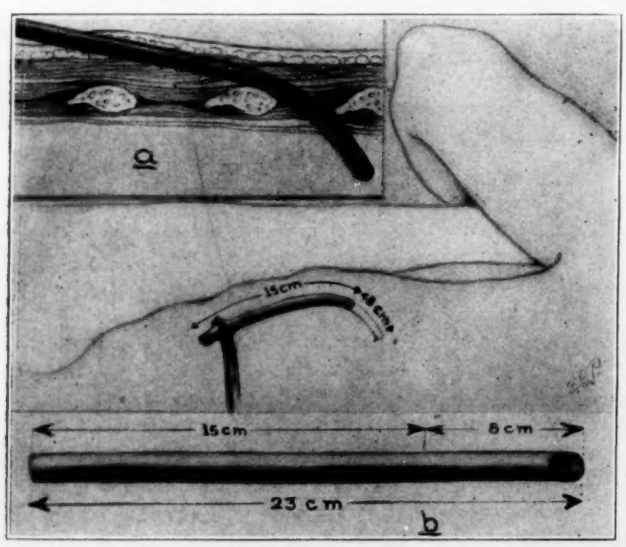

Fig. 5.—After release from upward pressure the skin and muscle drop to normal position, carrying the tube with them. The tube, therefore, passes obliquely through thoracic wall (inset *a*). If it is estimated that 8 cm. of tube should be internal to the skin to have its end well within the empyema cavity, then 15 cm. of tube must be external to the skin if the total length of the tube happens to be 23 cm. (inset *b*).

POSTOPERATIVE TREATMENT

One hour after operation the end of the drainage tube is placed under sterile boric acid solution in a small sterile vessel, the clamp on the tube is released and an estimated 60 cc. (30 cc. in small children) of pus is allowed to escape. Then the clamp is reapplied before the end of the tube is removed from the solution, thereby preventing the entrance of air into the chest. The clamp on the irrigation tube is not disturbed. The procedure is repeated hourly until pus will no longer escape. Then the drainage tube is connected through a sterile glass couple with a long sterile tube, filled with sterile boric acid solution, whose end is placed well under about 10 cm. of sterile boric acid solution in a sterile gallon jar placed on the floor, after which the clamp on the drainage tube is permanently removed (fig. 7). The long tube should be sufficiently long to permit turning the patient in bed without pulling its end out of the boric acid solution. As an extra safeguard to keep the tube end under the solution, the tube should be tied with tape to the neck of the bottle.

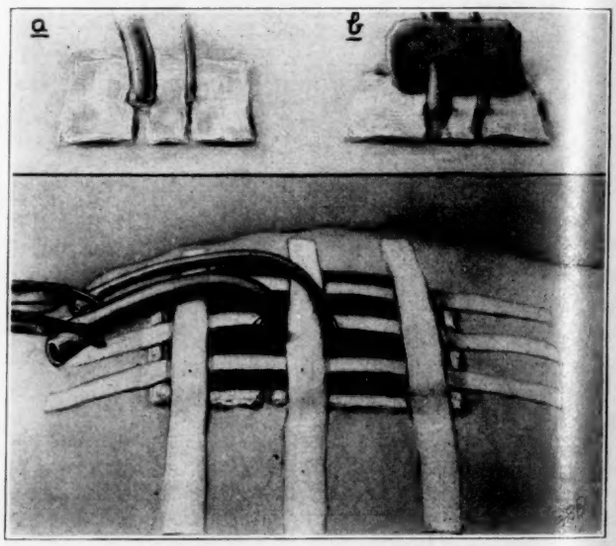

Fig. 6.—Inset *a*, drainage and irrigation tubes in adjacent intercostal spaces; petrolatum gauze next to skin; inset *b*, sheet of heavy rubber pulled snugly around tubes. Main drawing: tubes anchored to rubber sheet with silk, and sheet anchored to skin with adhesive straps. Tubes clamped to prevent entrance of air and escape of pus.

Now the apparatus is ready for irrigations with boric acid solution or surgical solution of chlorinated soda every two hours. With the air-tight tubes the patient need not assume any special posture in order that the solution may reach all portions of the cavity wall. A 30 cc. syringeful of the irrigating solution is connected with the irrigation tube before the clamp is removed. After its removal the solution is slowly injected, but never under pressure, as the drainage tube may be plugged. Irrigation is continued until the outflowing fluid is fairly clear of pus. Each time the syringe is removed for refilling, the irrigation tube must be clamped with the fingers or clamp to prevent entrance of air into the chest. For the same reason the long drainage tube to the bottle under the bed must be clamped before it is removed from the bottle at the time this is to be cleaned.

Apart from avoidance of the dangers of open drainage in early acute empyema, the closed method avoids

the disadvantages of almost constantly soaked dressings. Further, through the action of a siphonage system, it hastens expansion of the lung and obliteration of the empyemic cavity. Obviously, siphonage cannot be maintained in the presence of a widely open bronchopleural fistula.

A week or ten days after the operation, pleural adhesions are sufficiently firm and the track of the tube through the thoracic wall is sufficiently fixed to permit

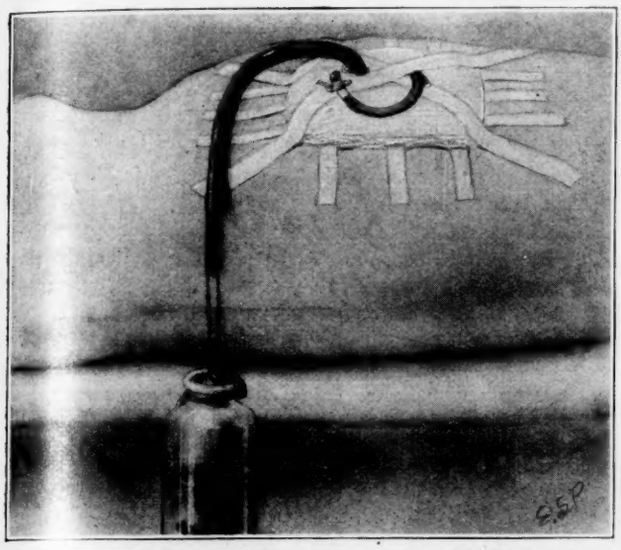

Fig. [illegible]—Irrigation tube clamped. Drainage tube connected with long tube filled with solution and immersed in jar of solution on floor. Tube tied to jar to prevent accidental displacement of its end from solution and sucking of air into chest.

removal of the tubes if it is necessary to change them to remove a plug from within them or to have the patient attempt to cough out of the cavity fibrinopurulent clots that will not pass through the drainage tube. At this time closed drainage may safely be abandoned if it is no longer satisfactory because the drainage tube is repeatedly becoming plugged (in which case dependent rib resection may then be necessary) or because of leakage of air and fluid around the tube. In adults secondary drainage by rib resection is occasionally necessary, but in children the closed method alone usually is sufficient. Pressure necrosis of a rib requiring sequestrectomy is surprisingly rare.

As the patient begins to convalesce from the infection, exercises are begun. These consist of deep respiration, stretching the contracted affected half of the thorax, and active use of those muscles that expand the affected side, raise the lowered shoulder, and straighten the spine. In some cases the patient is directed to blow against resistance (as by blowing fluid from one intercommunicating bottle to another) to inflate the partially collapsed lung. The effects of such exercises are so striking in hastening closure of the cavity, correcting postural deformity and bringing about return of pulmonary function that they should never be neglected.

The tubes should not be removed until such time as the lung and thoracic wall are in contact except at that small spot where they are held apart by the intrathoracic ends of the tubes. Complete expansion of the lung and closure of the cavity are best determined by sounding carefully with a curved uterine sound after temporary removal of the drainage tube. Continuation of irrigations and maintenance of the drainage tube in position until the cavity is actually obliterated are vitally important factors in preventing chronic empyema.

THE OCCURRENCE OF ACCESSORY PARATHYROID GLANDS *

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During a period of five months I had the opportunity to examine 1,056 thyroid glands immediately after removal at the Mayo Clinic. I was stimulated in the search for parathyroid glands in these cases by the recent articles of Terry [1] and Millzner,[2] and I found a surprisingly large number.

The parathyroid glands are derived from the third and fourth branchial clefts in close association with the thymus, in which development is complex and the subsequent migration of tissue marked. These factors greatly increase the possibility of accessory glands. Influenced by the development of the thymus, the occurrence of accessory parathyroid glands may be widespread over the neck and upper portion of the thorax. Schaper [3] and Jeandelize [3] each found masses of parathyroid tissue near the bifurcation of the common carotid artery in sheep. Meyer [3] found parathyroids in the thoracic thymus in sheep; Askanazy [3] in man, attached to the phrenic nerve, and Forsyth [3] in man, behind the sternum.

Supernumerary parathyroid glands are not uncommon. Klotz [3] found twelve in an adult dog, and Marine,[3] in routine examination at necropsy, found accessory parathyroid glands in 6 per cent of his dogs. Farner and Klinger,[3] in a rather crude examination of the thymus of cats, found parathyroid glands in 12 per cent; if serial sections had been made of the entire gland the percentage would certainly have been higher.[4]

The anatomy of the parathyroid gland was first accurately described in 1880 by Sandström,[5] who regarded it as an embryonic rest of thyroid tissue. Normally there are two pairs, superior and inferior. The superior glands usually lie posterior to the middle of the lateral lobes of the thyroid gland and are commonly embedded in the tunica propria of this gland. The inferior parathyroid glands usually are found on the posterior aspect of the inferior extremity of the lateral

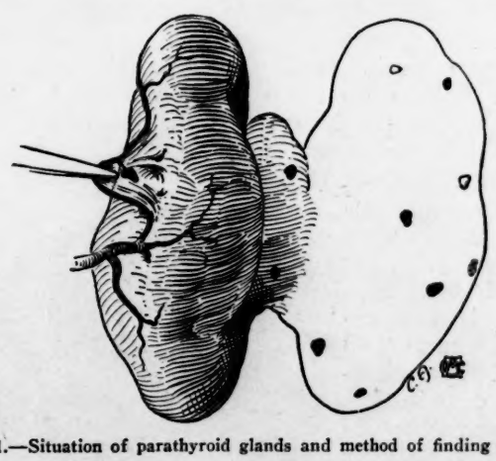

Fig. 1.—Situation of parathyroid glands and method of finding them.

* From the Division of Surgical Pathology, the Mayo Clinic.

1. Terry, W. I., and Searls, H. H.: Parathyroid Preservation, J. A. M. A. **89**: 966-967 (Sept. 17) 1927.
2. Millzner, R. J.: Occurrence of Parathyroids on Anterior Surface of Thyroid, J. A. M. A. **88**: 1053-1055 (April 2) 1927.
3. Quoted by Shapiro and Jaffe.
4. Shapiro, Shepard; and Jaffe, H. L.: On the Occurrence of Accessory Parathyroids and Their Relation to Survival of Animals After Parathyroidectomy, Endocrinology **7**: 720-724 (Sept.-Nov.) 1923.
5. Sandström, J., quoted by Hertz, A. F.: The Parathyroid Glands, Practitioner **94**: 107-111, 1915.

lobes and may also be embedded (fig. 1). Each parathyroid body is supplied with blood by a single artery which enters the gland at the hilum, coming from a branch of the inferior thyroid vessel. The parathyroid gland is surrounded by a thin connective tissue capsule which also forms septums within the gland, sometimes dividing the gland into lobules. The stroma is vascular and often contains a large amount of fatty connective tissue.[6]

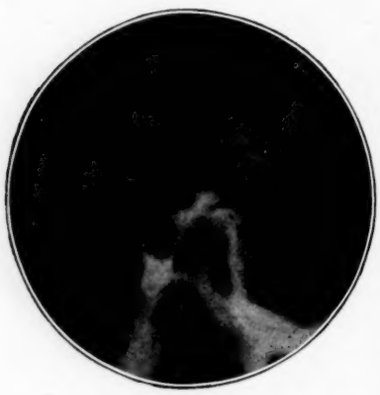

Fig. 2.—Lymphoid-like cells (oil immersion).

The gland may be almost wholly cellular or the groups may be widely separated. The cells are arranged in irregular groups or cords, sometimes having a distinct alveolar structure; in the latter case colloid may be present in the lumen. Two kinds of cells are recognized. Most of them are small spheroidal, cuboidal, and lymphoid-like with basal nuclei, and the cytoplasm does not stain readily (fig. 2); the others are larger, and have a clear granular cytoplasm and a small nucleus. The latter are the so-called foam cells (fig. 3). Compact groups of these cells are found throughout the gland, arranged in cords, as single cells, or as small groups among the lymphoid-like cells.

Millzner, by examination of specimens removed at operation and from cadavers, found a parathyroid gland on the anterior capsule of the thyroid gland in 12.9 per cent. The largest thyroid gland on which he found a parathyroid gland weighed 350 Gm., and the smallest 18 Gm.

The parathyroid glands found in this series were situated anywhere on the anterior surface, on the isthmus or on the lateral surface, and a few were embedded in the thyroid tissue, just within the edge of the thyroid gland (fig. 1).

One or more parathyroid glands were found in 7.76 per cent of the 1,056 thyroid glands examined. These were all checked by microscopic examination. The parathyroid glands are finely granular, soft, yellowish brown, lenticular, spheroidal or pear-shaped structures, from 2 to 10 mm. in diameter. Parathyroid glands are often confused with accessory thyroid glands, lymph nodes, hemolymph glands and lobules of fat. This is the chief reason for the failure of transplants.[7]

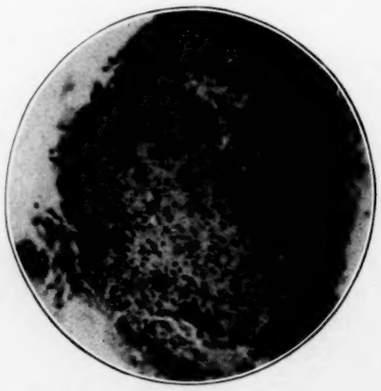

Fig. 3.—Foam cells (× 100).

Parathyroid glands were found in equal numbers on exophthalmic, adenomatous and colloid goiters. The largest gland on which a parathyroid gland was found was adenomatous, weighing 275 Gm.; the smallest was a hypertrophic parenchymatous gland weighing 8 Gm. In two cases, three parathyroid glands were found, in one of which the three were in a cluster. In three cases, two were found, and in two cases one was on each lobe of the thyroid gland.

In only one case was there mild transitory tetany following thyroidectomy.

SUMMARY

The careful search for parathyroid glands on specimens of thyroid glands removed during operation has resulted in the discovery of these glands in about 8 per cent of cases. Their color, shape, consistency and situation make them fairly characteristic.

The situations and the absence of any postoperative tetany make it reasonable to consider that certainly the majority of these glands are accessory. In most cases, because of their situation, removal is unavoidable.

6. Cunningham, D. J.: Textbook of Anatomy, ed. 5, New York, William Wood & Co., 1921.
7. Lahey, F. H.: The Transplantation of Parathyroids in Partial Thyroidectomy, Surg. Gynec. Obst. **42**: 508-509 (April) 1926.

ABSCESSES IN TUBERCULOSIS OF THE SPINE *

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BOSTON

In a recent study of 100 cases of tuberculosis of the spine, undertaken to determine the presence or absence of psoas abscess, only fifteen cases showed such a condition clinically. Fourteen other cases showed the presence of perivertebral abscesses by roentgenographic study, making a total of twenty-nine cases of abscess, or an incidence of 29 per cent. This is a little higher percentage than most observers give, but their observations were clinical and not checked in most instances by roentgenograms.

It is probable that, in a large majority of all cases of tuberculosis of the spine, an abscess of greater or lesser extent exists at the site of the disease. To find an abscess associated with definite bone destruction should not excite any particular curiosity; not to find one with evidence of like bone destruction should be a matter of considerable interest.

The abscess may increase in size, and generally does, but does not always make its presence known as either a psoas abscess or one that presents in some other location some distance from its origin.

This study was made primarily to determine the presence or absence of abscesses, clinically and by roentgenographic study, and the methods of behavior of the abscesses or their location as affected by gravity will not be considered.

Primarily, I was interested in the development and recession of the psoas abscess as shown by roentgenographic study over a period of years, as well as the behavior of the perivertebral abscesses in relation to the progress or healing of the tuberculous process.

Naturally a study of roentgenograms in these cases has led to observations on the vertebral bodies themselves, the effect of the abscess on their contour, and the number involved, apart from the original focus. It has been of interest to note that many changes take place which until recently have been unrecorded

* From the Orthopedic Service of the Children's Hospital.

and have been impossible of determination except roentgenographically.

The existence or nonexistence of spinal deformity or kyphos does not seem to have any relation to the presence or absence of an abscess. Generally the more vertebral destruction present, the more likely is there to be an abscess.

If simple perivertebral thickening as noted by roentgenograms about the area of disease implies an abscess, then practically every case shows the presence of such a condition.

The accompanying table shows the occurrence of the abscess in relation to the location and the sex.

DURATION OF DISEASE

The duration of the disease does not bear any real relation to the formation of an abscess, nor, curiously enough, does the apparent amount of bony destruction of one or several vertebrae. It is true, however, that in the healing process and convalescent stage of spinal tuberculosis there is a recession in the size of the abscess, if present, associated with marked calcification as shown in the roentgenograms. This process of calcification is apparently a healing process; it occurs in the vertebral bodies as well, and may be interpreted generally as a favorable sign. Calcification in an abscess is at least a sign of age.

Fig. 1.—Tuberculous spine of four and a half years' duration, showing multiple abscesses in the dorsal region; partially calcified.

Fig. 2.—Tuberculous spine of nine years' duration, involving six vertebrae and showing a large calcified psoas abscess on the left.

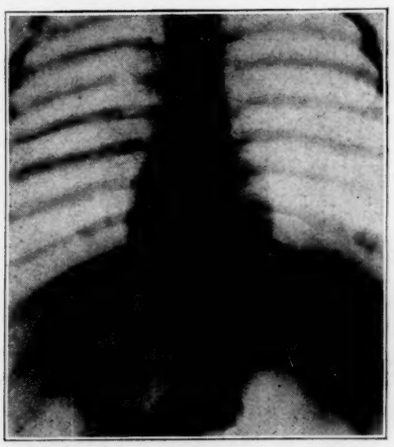

Fig. 3.—Tuberculosis of the ninth and tenth dorsal vertebrae of four months' duration, showing typical fusiform abscess extending upward at least four vertebrae above the site of the disease.

Occurrence of Abscess in Relation to Sex and Location

	Number	Abscess Clinically	Abscess Roentgenographically
Male	56	..	..
Female	44	..	..
Cervical	4	4	0
Dorsal	69	6	13
Lumbar	27	5	1

As a rule, large perivertebral and psoas abscesses are more frequently encountered in the later stages of the disease, but they may occur early, even before any spinal deformity is evident. Other patients may pass through the entire course of the disease without any clinical and few roentgenographic evidences of an abscess. In the latter cases, perivertebral thickening as seen in a roentgenogram may be interpreted as an abscess.

In this study of 100 cases it has been impossible to determine the time of development of the perivertebral abscess, or the psoas abscess, in exact relation to the duration of the disease. All one can say is that, in general, a palpable psoas abscess is a late development and appears months after the onset in the vertebrae.

CAUSES OF ABSCESS FORMATION

Since a tuberculosis lesion is essentially destructive there must be waste products of such destruction. Therefore, an abscess is formed. Whitman says, "It may be assumed that a limited collection of tuberculous fluid is present at some time during the course of a Pott's disease in the great majority of cases."

In the dorsal region these abscesses cannot be detected clinically unless they extend backward along the course of the ribs and present on the back; in the cervical and lumbar region they are more evident clinically.

If the disease is extensive and involves many vertebrae, one or more abscesses may occur. Destruction of one or several vertebrae may occur as well as involvement of the ribs, and articular and muscular processes, such as the laminae and transverse processes. Such extensive involvement may be due not only to direct pressure by the abscess but to direct extension of the tuberculosis.

Such extensive bone destruction may and has led to spinal cord pressure, and even complete section, resulting in paraplegia, transient in the former class and permanent in the latter condition.

APPEARANCE AND BEHAVIOR OF ABSCESSES

The size and shape of abscesses is dependent largely on the restricting influence of the anterior common ligament of the vertebral column. According to Gray this anterior common ligament consists of dense longitudinal fibers, which are intimately adherent to the intervertebral substance and the prominent margins of the vertebrae, but less closely to the middle of the bodies. In the latter situation the fibers are exceedingly thick and serve to fill up the concavities on their front surface and to make the anterior surface of the spine more even. Another important point with regard to the location of an abscess is the anatomic relation of the intervertebral disks to the anterior ligament to which they are closely connected by their circumference in front, and behind to the posterior common ligament. In the dorsal region they are connected laterally, by

means of the interarticular ligament, to the heads of those ribs which articulate with two vertebrae; they consequently form part of the articular cavities in which the heads of these bones are received.

In the cervical region abscesses may present in the posterior pharynx, and in the neck in the sheath of the sternomastoid. When an abscess forms it is generally evident clinically. In the lower cervical regions, abscesses may displace the esophagus and trachea forward and result in difficulty in speech, swallowing and breathing.

In the dorsal region, abscesses less frequently come to the surface. Their presence can be determined only by roentgenographic studies. In the upper dorsal region they incline to work upward toward the upper opening of the thorax. In the roentgenogram they assume the shape of a heart and are fusiform or globular.

Middorsal abscesses are more varied in form and location. They may be single or multiple. They do not migrate upward and cannot go below the diaphragm, because of the diaphragmatic movements that compress them at every inspiration. They may and do develop laterally, assuming a globular form. Even without much vertebral destruction the abscess may work backward through the rib articulation, owing to the resistance of the anterior ligament, and appear on the back.

In the lumbar region an abscess may generally be palpated in the abdomen and in the iliac fossa, but in no small number of cases it is evident only by roentgen examination. In many cases which clinically have been recorded as not showing an abscess, a well developed abscess is revealed by roentgen examination.

Both Ghormley [1] and Willis [2] have pointed out that extension of the dorsal abscess may and does involve adjacent vertebrae and leads to erosion of the bodies to a greater or lesser extent. Ghormley believes that this anterior erosion is due to two conditions: (1) an inflammatory one in which the direct extension of the tuberculous material causes destruction of the vertebral body and intervertebral disk, and (2) a mechanical condition in which there exists an erosion of the bodies but with intact disks, though the aortic pulse is transmitted in aneurysmal-like action to the bodies. Just why the disks are spared this mechanical erosion is not explained.

Fig. 4.—Tuberculosis of spine of three and a half years' duration, showing two large calcified psoas abscesses not palpable clinically.

In the lateral views of tuberculous spines, the anterior surface of the bodies of the vertebrae in the affected areas may in many cases be seen to be more concave than normal.

This concave appearance is quite extensive at times and includes a number of vertebrae well above the main focus of disease. This condition is of course due to the extension of the disease upward under the anterior common ligament with resulting erosion of the anterior surfaces of each body. As many as six or seven bodies may be involved from one focus. When there is more than one focus, situated at different levels, more bodies, of course, may give this appearance and multiple abscesses as well may be present. In other words, the area that the abscess covers corresponds roughly to the extent of the vertebral disease, either primary or secondary. As time goes on the disease becomes quiescent, and no more detritus is manufactured by bone destruction or inflammatory reaction. The abscess then recedes in size, and eventually many absorb and disappear. Caseation takes place in many, associated with more or less calcification.

Fig. 5.—Same case two and a half years later, total duration six years, showing progression of abscesses downward, one involving the iliac fossa without any apparent increase in the area of destruction in the vertebrae.

CONCLUSION

This study has shown that in a large number of cases of vertebral tuberculosis there are either large or small abscesses.

In some cases they are present as palpable tumors; in others they can be determined only by roentgenograms.

Abscesses increasing in size represent increasing vertebral destruction.

A new interpretation should be placed on the term "abscess" in reference to tuberculosis of the spine; namely, any perivertebral shadow as shown in roentgenogram, even without visible bone erosion in early suspected or known tuberculosis, should be called an abscess.

This shadow undoubtedly represents bone detritus plus local inflammatory reaction and therefore is pathologically an abscess.

Calcification in an abscess generally is a sign of quiescense of the disease and probably of healing. A decrease in the size or early absorption of an abscess is a favorable sign.

321 Dartmouth Street.

1. Ghormley, R. K., and Bradley, J. L.: Prognostic Signs in the X-Rays of Tuberculous Spine in Children, J. Bone & Joint Surg. **10**: 796 (Oct.) 1928.
2. Willis, T. A.: Pott's Abscess, Surg. Gynec. Obst. **43**: 285 (Sept.) 1926.

Early Public Health Measures.—Some fifteen hundred years B. C., Moses, the law-giver, handed out through the priesthood some quite wholesome, hygienic and sanitary regulations for the observance of his people, the Hebrews. Those might well be designated as public health measures. Greek mythology tells of how Esculapius, the god of medicine, had two daughters, Panacea and Hygeia, the former giving her time to the gathering of roots and herbs, which her father used in making infusions and decoctions for the treatment of his patients. Hygeia occupied herself in teaching the people how to keep well.—Wilson, W. H.: The Medical Professor, Public Health and the Public, *Nebraska M. J.*, May, 1929.

A CASE OF POLYCYTHEMIA RUBRA VERA WITH LEUKEMIC BLOOD PICTURE *

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When, in 1904, Türk [1] first noted the abnormal leukocyte counts that may appear in polycythemia, he did not seem particularly interested in the blood smear. On the other hand, Blumenthal,[2] during the following year, thought that he had discovered a new disease when he observed a leukocytosis with many myelocytes in a case of polycythemia. This condition is now well recognized and has been described by Weber,[3] Pendergrass and Pancoast,[4] Minot and Buckman [5] and others.

The case presented here is reported not only because it comes in this group, but also because the patient was under observation for almost two years before abnormal cells were seen. It was three years before the leukemic pictures became marked. In addition to the blood picture, the enlarged spleen is of interest. Most unfortunately a postmortem examination could not be obtained.

The patient was in the Presbyterian Hospital on three occasions: first, in the surgical department for six days; second, in the medical department for twenty-seven days and, third, in the medical department for eighty-two days. She was observed in the dispensary and also visited in her home. Owing to lack of cooperation on the part of the patient, there were some long gaps when she was not seen. In all she was observed over a period of almost four years (three years, eleven months).

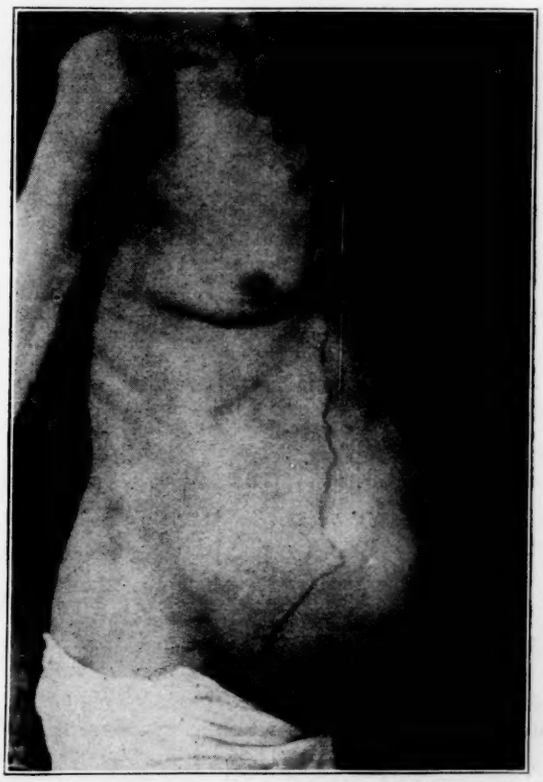
During the patient's three visits to the wards of the hospital, she was seen in the services of Drs. Adrian V. S. Lambert, Albert Lamb and D. W. Atchley, to whom I am indebted for the privilege of making this report.

REPORT OF CASE

History.—Mrs. A. S., a white woman, aged 57, a widow, although born in England, had spent all of her life in America and had always enjoyed good health. When seen, Jan. 11, 1921, she complained of a swelling in the abdomen of five years' duration. For about six months this mass had been getting larger and slightly painful. Although she had not lost any weight, she felt that she was losing strength. A physician had told her that this mass was the spleen and had given her medicine but no form of radiotherapy. With the possible exception of malaria thirty years before she could not recall any serious illness and was reasonably sure that she had never been jaundiced nor had any tendency to bleed. She had given birth to five normal children, three of whom had reached maturity.

Examination.—The patient was poorly nourished but moderately well developed and not acutely ill. The only point of interest in the examination of the head and face was a rather red and slightly bulbous nose. The teeth were missing and the tonsils were large and congested. There were a few scattered râles over both sides of the chest and dulness was present at the left base which was undoubtedly due to the large spleen. A soft systolic murmur was heard over all of the precordium but there was nothing to suggest any decompensation. The blood pressure was 130 systolic and 80 diastolic. The abdomen was pendulous and moderately distended by what appeared to be an enormous spleen, which was smooth, not tender, had an easily felt notch, and moved on respiration. This mass not only filled the whole of the left side of the abdomen but extended well to the right of the midline. The intestines seemed to have been squeezed into a small area in the right upper quadrant. There was no edema of the extremities and the reflexes were equal and active.

From the beginning the symptoms centered around the abdomen. The tremendous spleen was a grave handicap, and long before the patient became acutely ill her activity was curtailed by the tumor in the left side. For a time the interference was only mechanical but later on, and especially during the last months of her life, pain was almost constant and morphine was at times necessary. The size of the spleen varied, especially after roentgen therapy, but it was never found to be smaller than 20 by 15 cm. and was once noted to be 31 by 26 cm. The liver was also very large, and when there was fluid in the abdominal cavity one wondered where there was room for other viscera.



Appearance of patient two years before death. At this time the spleen measured 41 by 26 cm.

Fever was never an important symptom, and during the last admission the temperature was often subnormal.

Treatment and Course.—The general course was downhill but not without interruption. The patient was definitely benefited by the roentgen treatments during the first two years of her illness but lost confidence in this method of treatment and, as the benefit was only temporary, she was not urged to have it continued. Benzene with olive oil was tried, but she took only a few doses and then refused it altogether, so it is impossible to evaluate this form of medication. Her best weight was 144 pounds (65 Kg.), and the least that she was found to weigh was 120 pounds (54 Kg.). The loss of actual weight was probably greater than this because, on her last admission, she was too weak to be weighed, and as she was beginning to have ascites the emaciation was probably far greater than would have been indicated by the scales.

* From the Department of Medicine, Columbia University College of Physicians and Surgeons, and the Presbyterian Hospital.

1. Türk, Wilhelm: Beiträge zur Kenntis des Symptomen biles Polycythämie mit Miltztumor und "Zyanoze," Wien. klin. Wchnschr. **17**: 153-160, 1904.
2. Blumenthal, Richard: Un cas de polycythémie myelogenis, Bull. Acad. roy. de méd., Series 4 **19**: 775-818, 1905.
3. Weber, F. P.: Polycythemia, Erythrocytosis and Erythraemia, London, Lewis & Co., 1921.
4. Pendergrass, E. P., and Pancoast, H. K.: Close Relation of the Erythrogenetic and Leukogenetic Functions of Bone Marrow, Am. J. M. Sc. **163**: 797-818 (June) 1922.
5. Minot, G. R., and Buckman, T. E.: Erythemia, Am. J. M. Sc. **166**: 469-488 (Oct.) 1923.

The fluid in the abdomen increased and dyspnea was very annoying. This was, in a measure, relieved by paracentesis, 6,400 cc. of fluid being removed on two occasions during the last month.

For the last few months of her life she presented a pathetic picture—an elderly woman who was just "skin and bones," with an enormously distended abdomen. She could not, as a rule, get much rest lying down; she had an annoying cough, and there was pain in the abdomen. In many respects her last few weeks of life suggested the picture of a cirrhosis of the liver except, of course, for the tremendous spleen. Just before death, numerous crackling râles were heard over the lower lobe of the left lung. Thirteen urine examinations usually showed some albumin, but casts were never found. Occasionally there were a few red blood cells. The blood picture was of peculiar interest and will be considered separately.

Blood Counts.—With the exception of the first two, all the blood counts were done by me. The hemoglobin was estimated by the Fleischl and Miescher method. On admission the leukocytes numbered 17,500, but the differential count did not show any abnormal cells.

It was almost two years later (after an absence of more than a year) that the first myelocytes were seen. These were present in the proportion of 5 per cent. The leukocytes numbered 11,300.

Hemolysis of the control's cells began at 0.45 per cent and was complete at 0.35 per cent.

All of these observations were made during the patient's first admission to the hospital.

ROENTGEN THERAPY

The object of roentgen therapy was to cover as much of the body surface as possible, and to accomplish this half of the anterior and the whole of the posterior aspect (including the extremities) was exposed at a sitting. Three treatments were required to cover the whole body. After six months, during which time twenty-four treatments had been given, the formula was modified so that only half of the posterior aspect was exposed at a time and four sittings were required to expose the whole of the body.

For the first few weeks the patient was treated twice a week, but this seemed excessive and the period was increased to a week or ten days. As the disease progressed, the efficacy of the treatment was questionable. Then, too, the patient objected strenuously, so this method was discontinued altogether. In all, thirty-four exposures were given in a period of two years and seven months. The dosage varied from a third to a little less than a half of an erythema dose.

Blood Counts During Four Year Period of Observation

	Jan. 12, 1921	April 5, 1921	Nov. 14, 1922	Jan. 12, 1923	Mar. 2, 1923	July 17, 1923	Feb. 1, 1924	April 22, 1924	June 5, 1924	July 3, 1924	Oct. 14, 1924	Nov. 7, 1924	Nov. 28, 1924	Dec. 9, 1924	Dec. 20, 1924
Hemoglobin	100	119	100	110	97	105	128	80	..	90	100	..	100	95	85
Red blood cells in millions	9.4	7.9	6.4	5.9	4.4	5.9	6.1	5.6	..	4.9	5	..	4.5	4.1	4.1
White blood cells in thousands	17.5	3.8	11.3	1.5	3.3	6.4	8.0	16	31	31	55	77	96	75	66
Neutrophils	77	57	70	55	54	77	67	67	72	69	72	72	56	67	53
Eosinophils	1	1	1	4	5	2	1	2	2	1	2	3	3	5	4
Basophils	7	3	6	5	2	4	8	8	8	10	7	7	13	8	7
Neutrophil myelocytes	..	..	5	..	..	..	12	11	..	11	14	15	19	10	24
Myeloblasts	..	..	..	..	..	..	..	..	..	..	..	..	2	3	1
Lymphocytes	15	36	10	26	34	..	11	11	8	7	5	3	4	6	10
Transitionals	..	3	..	10	5	17	1	1	3	1	0	0	1	..	..
Uncertain	..	..	8	..	..	..	..	..	7	1	0	0	2	1	1
Nucleated red cells	5	9	31	0	2	9	38	32	22	29	39	25	4	10	19
	100	200	200		200	100	100	300	300	300	300	300	300	300	300

Nucleated red blood cells are indicated in terms of red cells per hundred white blood cells. In other words, 5 over 100 would indicate that 5 nucleated red blood cells were seen while 100 white blood cells were being counted. Although this method is not as accurate as a determination of the percentage of nucleated red cells, it is a convenient method when there are not many of these cells present.
The last roentgen treatment was given July 25, 1923.

Following radiotherapy, the leukocytes fell to only 1,500 and the myelocytes disappeared to return a little more than a year later (Feb. 2, 1924). After this, with only one exception (June 5, 1924), the myelocytes were always present and the leukocytes continued to be very high; 96,000 was the highest count, and 66,000 were noted a few days before death.

The number of white cells counted at each examination is given in the accompanying table. The number of nucleated red cells seen while a given number of leukocytes were counted is shown as a fraction. This simple and reasonably accurate method of recording normoblasts was used, as it gives a fair idea of the variation and is more convenient than an estimation of the actual percentage. Although there was some anemia, it was not as marked as one might expect.

Laboratory Data.—The blood counts were grouped separately. Examination of urine revealed 4,160 dilution units of urobilin and urobilinogen in a twenty-four hour specimen.

Puncture of spleen revealed: neutrophils, 44; basophils, 4; myelocytes, 4; myeloblasts, 4; megalokaryocytes, 1, and lymphocytes, 43 per cent. Four megaloblasts and fourteen normoblasts were seen in 100 white blood cells. Phenolsulphonphthalein tests for kidney function showed an excretion of 44 per cent. The blood urea was 0.34 Gm. per liter; the blood cholesterol, 0.21 per cent; solids, 22.2 per cent; chlorides, 6.3 Gm. per liter, and the serum protein, 6.2 per cent. The clotting and bleeding time were within normal limits. There was increased fragility of the red blood cells in salt solution. Hemolysis of the patient's cells began at 0.5 per cent and was complete at 0.4 per cent.

SUMMARY

A patient with polycythemia associated with a large spleen was observed for almost four years. While she was under observation, leukocytosis developed and myelocytes appeared in large numbers. Nucleated red blood cells also were present. The effect of roentgenotherapy, though temporary, was apparently beneficial.

Epilepsy.—In the early days of modern medicine almost every disease accompanied by convulsions was called epilepsy. Brain tumors, syphilis of the central nervous system, uremia, various intoxications, and convulsions due to congenital deformities of the brain, all were included under the general term of epilepsy. As our medical knowledge and diagnostic acumen advanced, these entities were gradually sifted out from the general group until today the diagnosis of essential epilepsy is made only after all other possible causes for the convulsions have been excluded. But, have we yet reached rock bottom? Is the disease which we now know as essential epilepsy as yet a homogenous entity? Does it not still include conditions that in years to come will be separated out until the entire group has been divided into entities which will be as well understood as uremia and cerebral syphilis are today? I think this is extremely probable.—Kamman, G. R.: Epileptic Equivalents, *Minnesota Med.*, May, 1929.

EXTENSIVE RESECTION OF SMALL INTESTINE

REMOVAL OF NINETEEN FEET OF ILEUM AND JEJUNUM *

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A careful survey of the literature on extreme resection of the small intestine reveals a surprisingly small number of reported cases. From this survey it is apparent that in most instances reports are made only of successful cases. Because of the extent of bowel removed, as well as the opportunity for subsequent observation, the following case is considered sufficiently important to be recorded.

REPORT OF CASE

History.—E. L., a man, aged 36, a laborer, admitted to the Memorial Hospital, Niagara Falls, June 12, 1926, with an essentially negative past history, had been seen first at his residence, where he had been seized during dinner with a sudden sharp pain across the lower portion of the abdomen. This pain was followed by vomiting of food which had just been taken. When the patient was seen shortly after the onset, he was suffering from intense abdominal pain; the abdomen was slightly distended, tympanitic, and slightly sensitive to pressure. He referred to the lower part of the abdomen as the seat of greatest pain. No remarkable rigidity was noted.

Examination.—The heart and lungs were normal. The temperature was 98.6 F., the pulse rate was 76. The patient was put to bed and one-fourth grain (16 mg.) of morphine was administered hypodermically; directions were given that he should not have anything by mouth. When seen the following morning at his residence, he had had a small movement of the bowels but only transient relief from the morphine, and had suffered considerable pain through the night. He was removed to the Memorial Hospital at 10 a. m., with a temperature of 99 F., a pulse rate of 88 and respiration of 22. Pain in the abdomen was increased by lying down. At this time the abdomen was painful to pressure, but slightly distended, and did not show any rigidity. At 11:15 a. m. an enema was given, following which the patient expelled considerable flatus and the abdomen appeared somewhat less distended. The blood count showed 16,200 leukocytes, 4,400,000 red blood cells and a hemoglobin of 85 per cent; the differential count was: polymorphonuclears, 89; small lymphocytes, 9, and large lymphocytes, 2 per cent. A second count at 1 p. m. showed 16,600 white cells, with 81 per cent polymorphonuclears; 16 per cent large lymphocytes, and 3 per cent small lymphocytes. At this time the patient seemed somewhat improved. There was less pain; distention was about the same, and he was fairly comfortable.

Operation (by Dr. Jerauld).—At 7 p. m. a decided change was noted. His face was drawn; respirations were rapid and labored; the pulse was rapid, and the body was covered with cold perspiration. An immediate exploratory operation was decided on, no diagnosis having been made. He was taken to the surgery at 8 p. m., and under ether anesthesia a right rectus incision was made. The peritoneum was very dark and had all the appearance of an intra-abdominal hemorrhage. When the opening was enlarged, however, the dark mass was found to consist of gangrenous small intestine. The incision was immediately enlarged and the gangrenous intestine pulled up and out of the incision up to about 2 inches (5 cm.) from the cecum. The line of demarcation was well defined and there was no constriction. The bowel was clamped at this point with two clamps and divided between the clamps, a small portion of healthy intestine being included. Resection was then started, the mesentery being whipped over with chromic catgut as the resection advanced. There was little bleeding and it was not found necessary to ligate any vessels of the mesentery. When the healthy intestine above was reached, two clamps were applied and the intestine was divided between the clamps, a small portion of healthy intestine being included in the proximal clamp. The ends of the healthy intestine were then closed and a rapid entero-enterostomy was done, the small intestine being anastomosed to the cecum with a fairly large opening and with two rows of sutures. The wound was closed with drainage. A pint of saline solution was given by rectum and the patient was returned to bed. The operation was done in approximately forty-five minutes. In view of the gangrenous intestine, it was obvious that the condition had been caused by an embolus of the superior mesenteric artery. After the operation was completed, the resected intestine was found to measure exactly 19 feet (579 cm.).

Subsequent Course.—Convalescence was uneventful. The postoperative pulse rate and the temperature were not unusual. Cracked ice was given as soon as the patient had recovered from the anesthesia. Liquid feedings and nutrient enemas were started two days after the operation, and on the fourth day after operation he was given peptonized milk, with a regular soft diet on the eighth day.

There was some drainage from the abdominal wound, which cleared up rapidly, however, with the exception of a small sinus at the lower angle of the wound, which persisted for several weeks. He was discharged from the hospital, August 7.

The patient stated that his weight before operation was 140 pounds (64 Kg.). August 15, at which time he was photographed, his weight was 134 pounds (61 Kg.). Although instructed to report for observation at frequent intervals, he dropped from sight after August 27, shortly before returning to work. He was not heard from again until June, 1927, at about which time a second operation was performed in San Francisco by Dr. Washburn.

At the time of the first operation there were several points of particular interest. First was the absence of shock at the onset; with the exception of pain and the blood picture there were few symptoms on which to base a diagnosis. Symptoms of shock were not noted until approximately twenty-four hours after the onset. Vomiting, which occurred only at the onset, was attributed by the patient to some hot rum he had taken for relief of pain. Pain was a constant factor; distention was negligible. There was no localized rigidity, and pain on pressure was very moderate. It was interesting to note that, with the large amount of bowel excised, the patient gained slowly in weight and returned to work, September 10, without having any remarkable digestive disturbances. Shortly after this he left Niagara Falls and went to San Francisco.

Second Attack, with Operation (by Dr. Washburn).—June 10, at 3 p. m., because of severe abdominal pain, accompanied by persistent vomiting the patient was admitted to the Southern Pacific General Hospital. He stated that he was first taken ill suddenly on the night of June 8 (two days before entering the hospital) with cramplike abdominal pains, which were especially severe across the lower part of the abdomen and about the umbilicus. He was vomiting small quantities of dark brownish fluid at frequent intervals. It was impossible to obtain a complete history on account of his poor physical condition, though he recounted the facts of the operation performed a year previously in Niagara Falls. He stated that his bowels had not moved since the onset of the present illness, and that vomiting of foul, brownish material had been almost constant for thirty-six hours.

When seen soon after entering the hospital he looked sick; the lips were parched and the facies was thin and drawn. There was a foul fecal odor to the breath. The pulse rate ranged from 120 to 135 and was of poor quality. The blood pressure was 105 systolic and 65 diastolic. The temperature was 98 F. and the respirations were 32.

The heart and lungs were normal. The abdomen appeared only moderately distended and there was no visible peristalsis. There was a wide scar over the lower right rectus area from the former operation. The percussion note was tympanitic throughout; there was no apparent dulness in the flanks. Palpation did not show any definite rigidity, although the abdomen

* Presented in part before the staff of the Southern Pacific General Hospital, San Francisco, June 8, 1927.

was moderately tender throughout, and especially so over the right lower quadrant. No masses were felt. Digital rectal examination was negative. The blood and urine examinations were not remarkable.

A diagnosis of acute intestinal obstruction was made and the patient was immediately prepared for operation. He was given 1,500 cc. of dextrose and saline solution intravenously and the stomach was thoroughly washed out. Stomach washings at first returned a foul brownish fluid with a fecal odor. A preoperative hypodermic of morphine, 1/6 grain (11 mg.), and of atropine, 1/200 grain (0.3 mg.), was given.

Operation was performed under gas-oxygen anesthesia. The incision was made mesial to and avoiding the old incision. When the abdomen was opened a greatly distended coil of small intestine presented. There was some increase in the peritoneal fluid, which was clear. The incision was lengthened to about 15 cm. and the cecum was identified. Close to the cecum were found a few old adhesions and one thick band which encircled the small bowel, about 4 cm. from its termination in the cecum. The adhesion was freed, relieving the obstruction. The appendix was free and innocent looking. The greatly distended coils of intestine above the site of the obstruction were allowed to escape from the abdomen and were covered with moist tape pads. The patient's general condition was fairly satisfactory. A hypodermoclysis of 1,500 cc. of physiologic solution of sodium chloride was given during the operative procedure.

It was decided to empty the bowel above the site of obstruction according to the manner of Holden[1] of Portland, Ore. An intestinal clamp was placed just below the site of obstruction, after which a purse string of Lambert linen suture was inserted surrounding the site of the intended incision. A longitudinal opening was made in the bowel and a tube was passed up about 3 cm., being held in place by a purse string suture. Beginning from above at the duodenojejunal region, the entire small intestine was emptied of its brownish foul smelling content by drawing the coils of intestine from above downward through the fingers, which had been previously anointed with sterile petrolatum. It was noted that there were three main coils of small intestine present which by hand measurements totaled not more than 10 feet (305 cm.). More accurate means of measurement were not available.

The bowel having been emptied, the tube was withdrawn and the opening closed with two layers of gastro-intestinal sutures. The abdomen was closed without drainage. It was remarkably free from other adhesions and the marked paucity of intestine was noticeable.

With the use of dextrose and saline infusions the patient made an uneventful postoperative recovery, except for some troublesome diarrhea the first two weeks which yielded readily to a diet, such as boiled skimmed milk, and rice along with doses of tincture of opium. The wound healed by first intention, and the patient was discharged from the hospital three weeks after operation.

Further history obtained from the patient relative to his condition after operation by Dr. Jerauld showed that he felt well and had lost but little time from work. He stated that his only discomfort had been from periodic "spells" of diarrhea which lasted from one to three days. As a rule he had two bowel movements a day. During these "spells" he would have from six to eight semiformed stools, which he stated were of extremely foul odor. He had not been accustomed to taking medicine for these "spells," which usually went away after two or three days. His weight had been about 140 pounds since leaving Niagara Falls. However, during the spells of diarrhea he at times rapidly lost from 6 to 8 pounds (3 to 4 Kg.), after which he would regain this weight. He was able to eat three meals a day and his appetite was excellent.

Follow-Up Observation.—Since the time of the patient's discharge from the Southern Pacific General Hospital in June, 1927, he has been seen at intervals of from six to eight weeks.

After recovery from the last operation he has been on a diet which is low in fats but high in carbohydrates and nitrogenous substances. With the taking of a diet rich in carbohydrates the patient finds that he has one or two normal movements a day, and there have been only two mild spells of diarrhea. These were rapidly checked by putting the patient on a diet of boiled skimmed milk and rice and eliminating all fats, bismuth and phenyl salicylate being given by mouth. He stated that he was not easily fatigued and that his strength was normal. He did not suffer from any digestive disturbances whatever, so long as he was careful about his diet.

Stool examination, July 10, 1927, showed a normal formed stool with the exception of excessive fat; there was an excess of indican in the urine. The basal metabolism rate, September 6, was plus 6.

Fluoroscopic examination after a barium meal showed the stomach of normal tone and position; there were no defects in outline, and no gastric residue after four and six hours. The barium meal passed through the small intestine and was found entering the cecum one hour after ingestion; the colon was not remarkable.

The patient's usual weight before intestinal resection in 1926 was about 140 pounds. Aug. 15, 1926 (after resection), his weight was 134 pounds. July 10 (one month after operation for obstruction), it was 140 pounds; Sept. 6, 1927, 141 pounds; Feb. 1, 1928, 144 pounds; September 20, 145 pounds, and Jan. 10, 1929, 145 pounds.

COMMENT

From a study of reported cases in which extensive resection (more than 200 cm., or 6 feet 7 inches) has been performed, it is noted that 200 cm. is often the limit of resection beyond which serious metabolic disturbances may result. Some persons are apparently not at all affected with a loss of one third of the small intestine, while others have a tendency to diarrhea. It is usually assumed that the normal person possesses approximately 22 feet of small intestine. However, in the case reported here there must have been more than the average length present. Treves,[2] in an examination of 100 bodies, found the average length in the adult male to be 22 feet 5 inches, and in the female 23 feet 4 inches. The shortest small intestine was 15 feet 6 inches, the longest 31 feet, a difference of nearly 16 feet. Thus the resection of 200 cm. (6 feet 7 inches) may equal about half the length of the small bowel but on the average equals one third. From the observations made at the time of the second operation in the case reported here, it appeared that approximately two thirds of all the small bowel had been excised.

The total number of cases of extensive resections of small bowel recorded to date is well under 100. Flint[3] in 1912 collected reports of fifty-nine cases with forty-eight recoveries. Moynihan[4] in 1918 found fifty-four reported cases with fifty-three recoveries. Watson[5] in 1923 reported the resection of 7 feet 6 inches of small intestine and in reviewing the literature on extensive resection found only seventy-two recorded cases.

Naturally the tendency is to record only successful cases in which there is recovery lasting from a short time to years. This accounts for the low death rate, 12 plus per cent. The mortality rate would probably be nearly the reverse if all cases of extensive resections were reported because of the pathologic process present, which of itself would tend to bring about a rapidly fatal ending.

In Flint's article on the effects of resection of a large amount of small intestine, the compensatory reaction that takes place in the remaining intestine after extensive resection is emphasized. He found by animal experimentation that the remaining intestine does not grow in length after resection, but grows to about twice the diameter. He was able to remove about 80 per cent of the combined ileum and jejunum in dogs and,

1. Holden, W. B.: Intestinal Obstruction, Arch. Surg. **13**: 882-886 (Dec.) 1926.

2. Treves, F.: Brit. M. J. **1**: 1415-1419, 1885.
3. Flint, J. M.: Bull. Johns Hopkins Hosp. **23**: 127-144, 1912.
4. Moynihan, G. B.: Abdominal Operations, ed. 4, Philadelphia, W. B. Saunders Company **1**: 543-547, 1926.
5. Watson, P.: Edinburgh M. J. **30**: 164-183 (Sept.) 1923.

when the diet was carefully regulated, the dogs lived indefinitely after operation.

The first effects of the operation were a diarrhea and loss of weight, from both of which the animal slowly recovered. Flint showed that shortening the intestine does not have any effect on the absorption of fat when the animal is on a diet poor in fat. When the fat is increased, however, the influence of the abbreviation of the intestine on the power of absorption is at once shown.

His metabolic studies showed that there was a marked increase in the excretion of nitrogenous, fatty and carbohydrate elements of the food. The elimination may even reach 66 per cent of the diet content. After compensation was established on a rich, easily assimilated diet, digestion went on as in normal dogs, except for an increase in intestinal putrefaction, as indicated by an increasing amount of indican in the urine. Increase in fat was poorly handled. The carbohydrates, on the contrary, were absorbed to a degree considerably above normal after the compensation was established.

According to Flint, this compensatory process consists in a hypertrophy as well as hyperplasia of the remaining portion of the small intestine. There is, however, no regeneration in either the villi or the crypts. There is an increase in the size of the crypts and villi amounting in some cases to a 400 per cent increase in the absorbing surface. Although complete compensation may occur, there may later on be a breakdown under unfavorable diet or disease. He states that the intestine, like other organs, probably rarely functions up to the limit of its capacity, there being a reserve power rarely called into use.

One of the longest resections was in Brenner's case, reported by Denk [6] in 1910, in which 540 cm. (17 feet 9 inches) of gangrenous bowel in a strangulated hernia was removed in a woman, aged 61. At first there were several fluid stools a day. She made a good recovery with very little metabolic disturbance for two years. She could not take milk and there was diminished fat absorption. She died of marasmus two and one-half years after operation.

Werelius [7] in 1907 reported resecting 12 feet 2 inches of small intestine which had prolapsed through the vulva of a woman, aged 20. An end-to-end anastomosis was done and the patient made a good recovery, after which she bore two healthy children.

In 1907, Storp [8] reported having removed 510 cm. (16 feet 9 inches) of small intestine from a man, aged 21. All of the ileum and part of the jejunum were removed. The operation was performed for sarcoma of the mesentery. Three months later the patient was in good general condition, had gained 11 pounds (5 Kg.), and had normal bowel movements, except for increased fat. Death ensued five months after operation from recurrence of the sarcoma.

Sarnoff [9] reported a resection of 15 feet of small intestine which had prolapsed through the vulva following multiple punctures of a uterus with a curet. Resection was done through an abdominal incision. It was also necessary to do a hysterectomy at the same time, as there were multiple bleeding punctures of the uterus. Although convalescence was at first stormy, he reported his patient after three months as being in good health.

Flosdorf [10] in 1925 reported a case in which resection of 6 feet of the small intestine was done in a woman, aged 26. Examination of the patient three years after operation showed that she had lost 17 pounds (8 Kg.) and that she was becoming progressively weaker because of digestive disturbances.

One of us [11] reported a case in which 6 feet of jejunum was resected for polyps which had caused multiple intussusception of the jejunum. The patient, a man, aged 21, made an excellent recovery and after leaving the hospital gained 22 pounds (10 Kg.). His appetite was excessive. Several mild spells of diarrhea were controlled by selected diet consisting largely of carbohydrates and proteins. Fats were poorly tolerated, often causing looseness of the bowels. For four months after operation he was unable to drink milk as it would "go right through" in a few minutes. With gain in weight and strength it was assumed that compensation was well established.

Jackson [12] in 1926 reported an interesting case of resection of two fifths of the entire small intestine in an infant, aged 2 years. Convalescence was extremely stormy, watery bowel movements being controlled occasionally by camphorated tincture of opium. For years the boy suffered from severe upsets with watery movements, there being often from five to eight unformed movements a day. However, each year he improved, and seven years after operation he was in excellent health, and for months had had only one or two normal bowel movements a day.

However, the limit of resection must have been reached by Doerfler,[13] who in 1917 did the longest successful resection ever reported in a human being. Resection was done for volvulus of the entire small bowel, of thirty hours' standing. After the gangrenous bowel was resected there remained only 12 cm. (4¾ inches) of upper segment at the duodenojejunal flexure, and 20 cm. (8 inches) of lower segment at the cecum. A side-to-side anastomosis was done, after which the reconstructed small bowel measured only 24 cm. (9½ inches). At the time of his report in 1923, six years after operation, the patient, aged 58, was in perfect health.

From experimental work as well as from a study of case reports, it will be seen that the prognosis in cases of extensive resection of the intestine must be guarded. Prognosis depends not only on the length of intestine remaining but on the general resistance of the patient and, especially, as emphasized by Flint, on the degree of compensatory reaction occurring in the remaining intestine.

When one considers this series of reported cases, as well as the one here presented, several facts should be borne in mind. In the first place, in measuring an elastic organ such as the intestine, there is no standard as a guide, so errors or discrepancies in measuring occur. There are certainly extreme differences in measurement because of the degree of viability of the intestine. Living intestine exposed to the air, owing to contraction of the longitudinal muscles, shrinks to less than half its normal length. Dead or gangrenous intestine, on the other hand, having lost its tonicity, may measure much more than normal. However, in Brenner's case, reported by Denk, the intestine was gangrenous, also in the case presented here in which operation was done by Dr. Jerauld.

6. Denk: Wien. klin. Wchnschr. **20**: 1649, 1907.
7. Werelius, Axel: Successful Resection of Twelve Feet and Two Inches of the Ilium, J. A. M. A. **48**: 945 (March 16) 1907. Carmady, J. E.: Ann. Surg. **69**: 425, 1919.
8. Storp: Deutsche Ztschr. f. Chir. **87**: 322, 1907.
9. Sarnoff, J.: Ann. Surg. **78**: 745-750 (Dec.) 1923.
10. Flosdorf, P.: Zentralbl. f. Chir. **52**: 1597 (July 18) 1925.
11. Washburn, W. W.: Case report presented at meeting of the staff of the Southern Pacific General Hospital, Sept. 5, 1928.
12. Jackson, R. H.: Surg. Gynec. Obst. **40**: 55-61 (Jan.) 1925.
13. Doerfler, H.: Zentralbl. f. Chir. **50**: 1502-1504 (Oct. 6) 1923.

SUMMARY

1. In the case here presented, a man in whom 19 feet of gangrenous intestine had been successfully resected survived a second operation for intestinal obstruction and is alive and well two and one-half years after operation.

2. Patients in whom extensive resections have been done should be given a diet rich in carbohydrates and nitrogenous substances and poor in fat.

3. In apparently desperate conditions calling for extreme resections, the patient should be given the chance of recovery. The minimum amount of intestine should be resected according to the pathologic condition present.

4. The prognosis in cases of extensive resections should be guarded. Death may ensue from "decompensation" and improper diet after many years of apparently perfect health.

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A DOMESTIC LIVER EXTRACT FOR USE IN PERNICIOUS ANEMIA

METHOD OF PREPARATION *

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AND
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The effectiveness of the treatment of pernicious anemia by means of whole liver [1] or liver extracts [2] has been clearly demonstrated by Minot, Murphy, Cohn and their associates, and has been amply confirmed by others. These methods, carefully pursued, result in such prompt improvement and maintained benefit to the patient as to leave little to be desired from the point of view of the physician who prescribes the treatment. He knows that if the regimen is faithfully continued the patient may reasonably expect to remain well; and he also realizes the almost certain danger of relapse if the therapy is abandoned or badly carried out. The patient, however, is less aware of the danger of stopping his liver diet and in many instances becomes more unhappily conscious of the difficulty of following the physician's simply given directions to "eat a half pound of liver a day," or of finding the money to pay for the relatively expensive commercial extracts week after week. This dilemma often assumes the proportions of a moral issue in the life of the impecunious patient who has become tired of liver, and, indeed, from such a patient came the suggestion of the desirability of finding some way by which the patients themselves could prepare palatable extracts at small cost.

The sufferer from pernicious anemia, like the diabetic patient, must frankly face the necessity of continued attention to his treatment, probably for the rest of his life, fortunately to a somewhat less exacting degree than in the case of the diabetic patient. In the economic aspects of the treatment of pernicious anemia, however, the medical profession has met a problem comparable to that introduced by the discovery of insulin. At present it appears desirable for most patients, the number of whose red blood cells has regained its normal value, to continue to take daily, either raw or cooked, about 200 Gm. of prepared liver, or the extract derived from 300 Gm. of liver.[2] The cost of many effective commercial liver extracts for treatment at present prices is about 85 cents a day. If the patient cannot afford this extract, the most palatable calf's liver may cost 75 cents a pound and so be nearly half as expensive, although the value of its protein and caloric content is of course retained. By using the cheaper kinds of liver, such as beef liver, which costs only about from 15 to 30 cents a pound, even at retail prices, the expense is greatly reduced, but the problem of eating a large daily amount of this less palatable liver is not avoided.

A process is here described, however, by which it is possible for any reasonably intelligent person to make from inexpensive beef liver an extract effective in the treatment of pernicious anemia. Although for those patients who can afford it the concentrated dry or liquid commercial products are undoubtedly the most convenient sources of the effective principle, it is believed that a simple process for the use of less fortunate patients will have a field of utility. The expense of the process, aside from the initial cost of the utensils needed, which are found in most kitchens, is practically the cost of the liver alone. With a little experience the time involved should not be greater than one-half hour daily. The extract so produced should not exceed in amount two ordinary drinking glasses (500 cc.) of a liquid tasting very like beef broth, and almost entirely free from the peculiar flavor of liver which offends many patients.

The process to be described is based on the first few steps of the original procedure used by Cohn and his associates [3] in the preparation of their extracts of liver effective in the treatment of pernicious anemia. Since it is not necessary to produce a substance of small bulk and great stability like a dry powder, it is possible at once to omit vacuum distillation and precipitation with alcohol, and merely to make a watery extract of liver and precipitate by heat the bulky proteins known to be inert. The filtrate will contain the active principle in solution, as has been shown by the originators of the process, now adapted from the laboratory to the uses of the kitchen. The following are the directions for the process that have been found best for patients to carry out.

DIRECTIONS FOR MAKING DOMESTIC LIVER EXTRACT

The utensils needed for making domestic liver extract are found in most kitchens and are a meat chopper, a quart rubber-sealed jar, two enamel saucepans, a wire strainer (mesh about seventeen to the inch), a tablespoon, unbleached fine mesh cloth, and a drinking glass.

1. In the evening somewhat more than a half pound of beef liver should be ground twice through a meat chopper, the finest cutter being used.

2. One glassful (280 Gm.) of the liver pulp (P_1), with one and one-half glasses (375 cc.) of cold water, should be placed in a quart rubber-sealed glass jar, shaken vigorously for five minutes, then put in the icebox and allowed to stand overnight, being shaken again if possible during the evening.

3. In the morning the jar is removed from the icebox and again shaken vigorously for five minutes. Then the readily

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1. Minot, G. R., and Murphy, W. P.: Treatment of Pernicious Anemia by a Special Diet, J. A. M. A. **87**: 470 (Aug. 14) 1926; A Diet Rich in Liver in the Treatment of Pernicious Anemia: Study of One Hundred and Five Cases, J. A. M. A. **89**: 759 (Sept. 3) 1927.

2. Minot, G. R.; Cohn, E. J.; Murphy, W. P., and Lawson, H. A.: Treatment of Pernicious Anemia with Liver Extract: Effects upon the Production of Immature and Mature Red Blood Cells, Am. J. M. Sc. **175**: 599 (May) 1928.

3. Cohn, E. J.; Minot, G. R.; Alles, G. A., and Salter, W. T.: The Nature of the Material in Liver Effective in Pernicious Anemia: II, J. Biol. Chem. **77**: 325 (May) 1928.

available reddish brown liquid (L_1) is strained off with a medium fine wire strainer (mesh about seventeen to the inch). The liver pulp (P_2) remaining in the strainer is replaced in the quart jar with one and one-half glasses of cold water, shaken five minutes, and again put in the icebox until evening.

4. The strained liquid (L_1) should be placed in an enamel saucepan and heated, with constant stirring, over as hot a flame as possible. The liquid will turn brown and curdle. The liquid should be allowed to boil only for an instant; then the saucepan is removed from the fire and cooled as rapidly as possible by immersion in cold water, until it is possible to squeeze the contents through double unbleached cloth after the manner employed in making jelly. This will give a slightly cloudy yellow liquid (E_1) and leave a dry pulp in the cloth.

5. The dry pulp from the cloth is replaced in the saucepan and from one-half to three-fourths glass of warm water (40 C.) added. This is stirred until the pulp is thoroughly broken up again, and then strained as before through the cloth. The second yellow liquid (E_2) is added to the first (E_1). The dry pulp is then discarded.

6. There should be about two glasses (500 cc.) of the yellow liquids (E_1 and E_2) combined. This is the extract to be taken by the patient in one day. It may be taken hot or cold. Salt adds to the flavor. If rewarmed, it should be kept well below the boiling point.

7. On the second evening and on each evening thereafter, the jar containing the original liver pulp (P_2), which is being extracted for the second time, is removed from the icebox, and, after being shaken five minutes, the available liquid (L_2) is strained off, exactly as in procedure 3. This liquid (L_2) is used instead of the one and one-half glasses of water with the new liver pulp as in procedure 2. The object of this is to secure a double extraction of each day's raw liver pulp without increasing the volume of extract.

COMMENT

The only difficulty encountered in explaining this method to patients is the idea of using the liquid (L_2) from the second extraction of the raw liver (P_2) to carry out the first extraction of the succeeding day's fresh liver (P_1) instead of water. Water is of course used in initiating the process on the first day. Since prolonged boiling may perhaps destroy the active principle, there is a potential danger in heating to boiling in order to precipitate the proteins instead of to only 70 C., as in the process employed by Cohn and his associates. As otherwise it would be necessary to use a thermometer to control the temperature, and as the taste and color of the product are greatly improved by momentary boiling, this step is advocated with the injunction to heat and cool the material rapidly. There is in this procedure also the possible advantage of a sterilizing or inhibiting effect on any organism that might be present. If the color of the extract is reddish rather than yellow, it signifies that the desirable actual boiling point temperature was not reached.

Under these conditions no perceptible destruction of the extract has been observed. It is possible, however, that, in using the process for the production of extract from larger unit amounts of liver, the increased bulk of the material, by preventing rapid cooling, might have an injurious effect. Yet these modifications of the original process [3] conducted with the amounts of liver here suggested do not appear to have affected it significantly, as cases of pernicious anemia treated with extract obtained by this method have demonstrated the effectiveness of the material.

It has been shown that within a period of a few days after the beginning of the daily feeding of an active extract of liver to patients with pernicious anemia, there appears with great regularity a transient but significant increase of the immature red blood cells (reticulocytes) in the peripheral blood.[2] The number of these cells demonstrable with brilliant cresyl blue in vitally stained preparations increases usually before the tenth day to a maximum roughly in an inverse proportion to the number of adult red blood cells present when the treatment is begun, and then declines within a few days toward its original value. For patients with an initial red blood cell count of about 2.3 million per cubic millimeter, the maximum percentage of reticulocytes produced by the daily administration of the extract from 400 Gm. or more of liver will be about 10. However, if an extract administered to such a previously untreated patient is not the full equivalent in activity of the effective preparation from 400 Gm. of liver, the proportion of these cells at their maximum will be less than 10 per cent. Following the peak of the reticulocyte production a progressive increase of the red blood cells will take place until, if the treatment is continued with adequate amounts of effective substance, a normal blood count is ordinarily attained.

The following is an illustrative case treated with extract prepared in the manner described.

REPORT OF CASE

A white man, aged 45, had entered the hospital two years before with classic addisonian pernicious anemia in relapse, and had then shown an excellent remission on a special liver extract, followed later by treatment with whole liver. For a year and a half he continued to eat liver as he had been directed; his health remained good, and his red blood cell count was essentially normal. He then did not return to the clinic for some months, and when next seen was obviously in another relapse. He stated that he had eaten very little liver in the past four months and recently had caught a severe head cold and completely lost his appetite. His temperature was 100.5, and physical examination showed scattered râles and small areas of bronchial breathing over both bases. Examination of the blood on readmission showed: red blood cells, 2,530,000 per cubic millimeter; hemoglobin (Newcomer), 61 per cent; white blood cells, 3,500 per cubic millimeter. The blood smear was typical of pernicious anemia. On the day of readmission he was placed on a house diet, with the addition of the extract made daily by the domestic process from half a pound (280 Gm.) of beef liver. The condition of the lungs improved within three days and he then became afebrile. The accompanying table shows the effect of this treatment.

Clinical Effect of Treatment with Domestic Extract

Days Treatment	Red Blood Cells, Millions per Cubic millimeter	Hemoglobin, per Cent	Reticulocytes, per Cent	Comment
0	2.53	61	1.0	Extract by domestic process
1	....	..	0.6	from one-half pound of beef
2	2.06	48	0.2	liver daily
3	....	..	0.6	
4	2.33	47	0.4	
5	....	..	2.8	
6	....	66	3.0	Looking a little better
7	....	..	8.2	
8	2.33	64	6.8	Color slightly better
9	....	..	11.0	
10	2.43	65	10.8	Much improved
20	3.28	73	1.8	Leaves hospital
29	3.50	95	...	
45	4.05	95	...	Back at work
73	4.75	122	...	"Feeling fine"

The effect of the daily administration to the patient of the extract derived by the domestic process from one-half pound (280 Gm.) of minced liver was to produce a remission quite comparable to that ordinarily seen with the daily ingestion of a potent commercial extract from a similar amount of liver. A rise of the reticulocytes began on the sixth day of the treatment and reached a maximum value on the ninth day of 11 per cent. This figure approximates closely the theoretical value of 10 per cent for an average initial red blood cell count of 2.3 million per cubic millimeter. Coincident with this effect in producing an increase of the reticulocytes appeared marked clinical improvement, followed by a steady increase in the total

red blood cell count until a normal value was subsequently attained. When patients whose red blood cell count is in the vicinity of 2.3 million per cubic millimeter are given daily a potent extract derived from 400 to 600 Gm. of liver, an average increase of about 1.5 million red blood cells per cubic millimeter is to be expected by the end of a month.[2] Assuming for this patient from the values preceding the reticulocyte rise an average count of 2.3 million red blood cells per cubic millimeter, an increase of about 1.2 million cells occurred by the twenty-ninth day, when the red blood cell count attained a value of 3.5 million per cubic millimeter. In view of the patient's initial infection, a condition well recognized as frequently retarding the rate of red blood cell production and of the smaller amount of liver from which the extract given was derived, this response may be regarded as entirely satisfactory and illustrative of the action of this extract in other cases.

CONCLUSIONS

It is possible by a simple method to prepare an active and palatable extract of beef liver for use in the treatment of pernicious anemia. The process is such that it may be carried out by the ambulatory patient in his own home at practically no cost additional to that of the liver used.

Clinical Notes, Suggestions and New Instruments

ACUTE THROMBOCYTOPENIC PURPURA CURED BY SPLENECTOMY *

W. A. KILLINS, M.D., OMAHA

Immediate and lasting relief from hemorrhage has followed the removal of the spleen in cases of chronic hemorrhagic purpura. It has been said that at operation hemorrhage has actually been seen to stop as soon as the pedicle of the spleen is clamped. Because equally dramatic cessation of bleeding followed the operation in an acute case of this disease which I saw recently, this report is made.

Thrombocytopenic purpura is an acute or chronic disease characterized by a marked diminution in the number of blood platelets, spontaneous hemorrhages from mucous membranes, and purpura. It was first differentiated from other forms of hemorrhagic disease by Werlhof in 1781 and is sometimes called Werlhof's disease. Since Kaznelson performed the first splenectomy for chronic hemorrhagic purpura in 1916, this procedure has become the standard treatment for this type of the disease. In 1925, Giffin and Halloway[1] collected reports of all the cases of splenectomy in the literature and added one of their own, making a total of twenty-eight cases that had been so treated at that time. All of the cases in their series were of the chronic type and the operation was uniformly successful.

Why splenectomy effects a cure in these cases is not definitely known. Brill and Rosenthal[2] feel that the immediate cessation of bleeding after operation indicates that the "normal spleen has some controlling mechanism on capillary activity through the medium of the blood platelets." They believe that the spleen exerts an influence on two important properties of the blood platelets; namely, that which produces clot retraction and the property of the platelets to agglutinate and form thrombi. They agree with Whipple[3] that the disease is probably one involving the entire reticulo-endothelial system but that, in the chronic cases especially, the spleen is mainly at fault.

Practically all authors agree that splenectomy is an advisable procedure for chronic thrombocytopenic purpura, but the treatment of the acute condition is under dispute, owing to the severity of the condition and the fact that most of the cases either terminate fatally or undergo spontaneous cure within a short time. In seven of the eight acute cases collected from the literature by Whipple, splenectomy was attended by a fatal outcome. He believes that chronicity of the disease and hypertrophy of the spleen are indications that splenectomy will be effective, because under these conditions it is probable that the major part of the thrombocytolysis is taking place in this organ. Reuben and Claman,[4] on the other hand, report an acute case occurring in a child, aged 3½ years, in whom splenectomy effected an immediate cure. They feel that there is a toxin produced by the spleen which increases the thrombolytic power of this organ, affects the megakaryocytes so that fewer platelets are formed, and renders the Rouget cells of the capillaries more permeable to extravasation of blood. It is obvious that the pathologic physiology responsible for this symptom complex is not understood, but because of the fact that acute cases are rare and often fatal, it seemed worth while to report a case in which splenectomy was successful.

REPORT OF CASE

A man, aged 24, was referred by Dr. C. L. Bain of Corning, Iowa, on account of severe bleeding from the mucous membranes of the mouth and hemorrhages into the skin. There was no history of hemorrhagic disease in the patient's family. He had never had any serious illness but had had attacks of tonsillitis, for which tonsillectomy was done in 1914 without unusual bleeding. Five weeks before the onset of the present trouble, he had had a tooth extracted without incident, the gum bleeding normally for a short time. The tooth socket did not seem to close properly, however, and, after five weeks, he returned to his dentist for examination, at which time a small spicule of bone was removed without any loss of blood. During the night following this manipulation, he awakened to find his mouth full of blood. This bleeding persisted and an examination by the dentist the next morning revealed the fact that the bleeding was from all gum surfaces, as well as from the site of recent extraction. Dr. Bain was called and found numerous petechial hemorrhages in the skin over the trunk and especially below the knees on both legs. He made a provisional diagnosis of hemorrhagic purpura, and referred him for further study. When the patient entered the hospital, Dec. 5, 1928, the temperature was 101 F. and he was perfectly comfortable, feeling strong and well. There was free bleeding from all gum surfaces, so that there was a constant rapid dripping of a mixture of blood and saliva from the mouth. A large, poorly organized clot filled the cavity of the recently extracted tooth. There were numerous submucous hemorrhages on the faucial pillars and soft palate, and innumerable petechiae in the skin of the trunk and the extremities. The blood pressure was normal; urinalysis did not show any blood in the urine, and a test of the stool for occult blood was negative. An examination of the blood showed 85 per cent hemoglobin (Sahli); 5,200,000 erythrocytes, and 11,000 leukocytes. The coagulation time (Lee) was eight minutes and the bleeding time longer than thirty minutes. There was no retraction of the clot in forty-eight hours. A tourniquet or capillary resistance test was strongly positive. The spleen was not palpable. December 6, the day after admission, the platelet count was 18,000; the purpuric spots were more numerous and increasing in size, and the urine passed during the night contained so much blood that it coagulated on standing. An autotransfusion, by subcutaneous injection into the thigh of 20 cc. of whole blood taken from the patient's arm, did not have any apparent effect. A transfusion of 500 cc. of citrated blood was done without any reaction, and with only slight decrease in the bleeding from the gums.

December 7, the platelet count was 4,000. There was less bleeding from the gums, but the urine was still extremely bloody. The patient's general condition was fair and he felt quite well. The hemoglobin was 80 per cent, and there were 4,300,000 erythrocytes and 10,000 leukocytes.

December 8, there was moderate bleeding from the gums, but the urine was very bloody, and an enema resulted in a large amount of bloody stool. The platelets numbered 3,800.

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1. Giffin, H. Z., and Halloway, J. K.: A Review of Twenty-Eight Cases of Purpura Hemorrhagica in Which Splenectomy was Performed, Am. J. M. Sc. **170**: 186-204 (Aug.) 1925.

2. Brill, N. E., and Rosenthal, Nathan: The Treatment of Splenectomy of Essential Thrombocytopenia, Arch. Int. Med. **32**: 939-953 (Dec.) 1923.

3. Whipple, A. O.: Splenectomy as a Therapeutic Measure in Thrombocytopenic Purpura Hemorrhagica, Surg. Gynec. Obst. **42**: 329-341 (March) 1926.

4. Reuben, M. S., and Claman, L.: Splenectomy in Acute Thrombocytopenic Purpura, Arch. Pediat. **45**: 84-97 (Feb.) 1928.

December 9, the hemoglobin was 70 per cent, and there were 3,400,000 erythrocytes and 8,000 leukocytes. The platelets numbered 27,000. The patient was definitely weaker and there was constant bleeding from both the urinary tract and the bowels. In view of the fact that there was no indication that the bleeding would stop spontaneously, and no definite improvement followed transfusion, it seemed best to do a splenectomy before there was sufficient loss of strength to increase greatly the operative risk.

December 10, the urine and stool had the appearance of pure blood. The patient was given a transfusion of 500 cc. of citrated blood on the operating table, and the spleen was immediately removed by Dr. C. A. Roeder. The splenic mesentery was fan shaped and extended the entire length of the spleen, but the operation did not offer any great technical difficulty and the bleeding during the operation was not excessive. The spleen weighed 173 Gm. and was apparently normal both grossly and on microscopic examination.

The first specimen of urine obtained on the evening of the operation showed only a small amount of blood and the second specimen was entirely clear. There was no bleeding from the gums, and the submucous hemorrhages in the mouth had begun to desiccate.

December 11, the first postoperative day, the platelet count was not obtained. The general condition of the patient was good, but he was unable to sleep in spite of large doses of morphine. He complained of pain in the region of the wound.

December 12, the platelet count was 310,000. Wakefulness continued to be the greatest problem. There was no bleeding.

December 13, the platelet count was 400,000. The hemoglobin was 50 per cent and there were 2,200,000 erythrocytes and 12,000 leukocytes. A transfusion of 500 cc. of citrated blood was given. The patient gained very rapidly following transfusion, and convalescence was rapid. The petechial hemorrhages gradually faded and there was no more bleeding from any source. He was dismissed from the hospital, December 28, on the seventeenth postoperative day. At the time of dismissal, the platelet count was 380,000, the coagulation and bleeding time were normal, and no petechiae appeared after a tourniquet had been applied to the arm for three minutes.

March 1, 1929, the patient was in perfect health. There had been no bleeding from any source and he was working steadily. The platelet count was 105,000. The return of the platelet count to a point below normal has been observed in almost all cases, but it seems not to predispose to bleeding after the spleen has been removed.

COMMENT

The most important factor in the management of cases of hemorrhagic disease is accurate diagnosis. Hemorrhagic purpura must be differentiated from hemophilia, acute aplastic anemia with hemorrhagic manifestations, and acute leukemia. Hemophilia, in addition to the family history, presents distinctive laboratory observations. There is a normal bleeding time and prolonged coagulation time in this disease, while in hemorrhagic purpura the bleeding time is prolonged and the blood clots promptly, but the clot is soft and does not retract. In hemophilia, also, the platelet count is normal. Acute aplastic anemia sometimes closely simulates purpura hemorrhagica. In the former disease, however, there is a proportional diminution in number of all the formed elements of the blood, so that a marked leukopenia is the rule as opposed to purpura hemorrhagica, in which the platelets are particularly affected and a moderate leukocytosis is usual. The absence of reticulated cells, or other evidence of bone marrow response, is also characteristic of aplastic anemia. Acute leukemia with a normal leukocyte count is distinguished by the presence of immature cells.

Acute thrombocytopenic purpura is a very rare disease and, as a result, there has not been a sufficient number of cases observed to warrant generalizations. I am well aware of the fact that any condition which occasionally undergoes spontaneous cure is liable to many "specific" treatments. Whether in the case reported here recovery would have taken place had nothing been done is a question that can never be definitely answered. To witness the abrupt cessation of hemorrhage in a robust person who is bleeding profusely from every possible source is an experience not easily forgotten, however, and the natural tendency is to credit the operation with saving a life. In any case of hemorrhagic purpura, transfusion should be tried before splenectomy, but if no apparent improvement follows this procedure and the patient is rapidly becoming exsanguinated, the operation should not be too long delayed. Giffin[5] has called attention to the fact that postponing operation until the blood count is brought to normal by transfusion may predispose to cerebral hemorrhage. I agree with Reuben and Claman that the sweeping assertion that splenectomy should not be done in acute hemorrhagic purpura is unjustified and that the operation should be tried if more conservative measures are not effective.

SUMMARY

1. Most writers on the subject advise against splenectomy in acute hemorrhagic purpura.

2. In the case of rapidly progressing hemorrhagic purpura here reported, splenectomy was performed on the sixth day of the disease with an apparently complete cure.

3. It is important to differentiate this disease from hemophilia, acute aplastic anemia with hemorrhagic manifestations, and acute leukemia.

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BACKACHE IN GOLF AND IN POLO

HORACE GRAY, M.D., CHICAGO

Inquiry of several well known orthopedic surgeons indicates that the literature has little to say regarding the relationship between sacro-iliac or lumbosacral strain and such trunk-twisting exercises as golf and polo, and that in their experience lame backs developing from such exercises seem to involve one side as often as the other.

Within the last few months three cases have come to my attention which showed uniform symptoms:

The age ranged from 35 to 45 years. The side involved was the left, all the patients being right-handed. The cause was golf practice (*a*) with clubs involving a brisk snappy twist of the trunk (mashie and especially niblick), not with clubs for distance (driver, brassie, number 1, or midiron), when (*b*) the same stroke was repeated steadily.

Single strokes with these clubs made in the course of play had not caused backache in any of the three subjects. Two of them have had an attack twice in identical circumstances during practice, and one had a similar attack while playing polo. The onset seemed usually to begin with a sensation which might be called an aura of slight discomfort in the back; then after one or two strokes more the pain would come on so acutely that the subject hobbled into the clubhouse.

It would appear desirable that patients subject to low back strain be warned specifically against practice with short distance clubs.

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A NEW DIAGNOSTIC AID IN SUSPECTED EXTRAPERITONEAL BLADDER RUPTURE

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The case reported here is presented because of the absolute yet unique manner in which a diagnosis of ruptured bladder was made, in spite of negative Vaughan-Rudnick air cystograms.

Miss J. S., aged 24, was brought to the Berwyn Hospital on the evening of April 3, 1929, after the automobile in which she was riding had been struck and overturned by a Rapid Transit car. After a few hours of rest the moderate shock of the patient subsided, and she complained of suprapubic distress. A roentgenogram of the pelvis showed fractures of both rami of the right and left pubes. On catheterization, 150 cc. of bloody urine was obtained.

Three hundred cc. of air was injected into the bladder, but air cystograms and fluoroscopic studies by the Vaughan-Rudnick

5. Giffin, H. Z.: Splenectomy in Cases of Purpura Hemorrhagica, Minnesota Med. 8: 207-214 (April) 1925.

method[1] were not abnormal. Two hours later, distinct crepitation could be felt beneath the skin in the suprapubic area from the symphysis midway to the umbilicus.

The bladder was exposed immediately by the suprapubic approach, and air bubbles appeared in the sanguineous fluid in the preperitoneal and Retzius spaces. The muscles of the anterior wall of the bladder were lacerated and torn apart for a distance of about 4 cm.; but there was only a pinpoint opening through the external serous coat, and this was discharging bubbles of air in bloody urine.

The bladder was opened, explored and found intact elsewhere, though there was a tear in the posterior wall of the membranous urethra. Mushroom catheters were placed in the urethra and suprapubically, and the bladder was sutured, with ample provisions for drainage of the space of Retzius and the preperitoneum.

The suprapubic tube was removed in ten days, the urethral catheter in eighteen, and the patient made an excellent recovery after a moderately stormy early period.

We believe that palpation of the suprapubic and perineal regions as well as digital rectal examinations should be done as a routine following the air distended bladder method of roentgenologic examination in cases of suspected bladder rupture in which the diagnosis is still in doubt. Lateral plates of adequate clarity are often difficult to take, and in small extraperitoneal ruptures it may take some time for the air to escape from the bladder. Palpation may then reveal crepitation and make possible an absolute diagnosis.

THALLIUM ACETATE: TABLE FOR ESTIMATING DOSAGE*

MARCUS RAYNER CARO, M.D., NEW YORK

The increasing use of thallium acetate for epilating the scalp in children suggested the preparation of a handy table for the estimation of the required dose. It is hoped that this will save considerable time and will minimize the possibility of error in calculating the dose for an individual patient. The table is based on the standard dose of 8 mg. of thallium acetate per kilogram of body weight.

Table for Estimating Dosage of Thallium Acetate

Pounds Body Weight	Kilograms Body Weight	Grams Thallium Acetate
¼	0.1134	0.0009
½	0.2268	0.0018
¾	0.3402	0.0027
1	0.4536	0.0036
2	0.9072	0.0073
3	1.3608	0.0109
4	1.8144	0.0145
5	2.2679	0.0181
6	2.7215	0.0218
7	3.1751	0.0254
8	3.6287	0.0290
9	4.0823	0.0327
10	4.5359	0.0363
20	9.0718	0.0726
30	13.6077	0.1089
40	18.1436	0.1451
50	22.6795	0.1814
60	27.2154	0.2177
70	31.7513	0.2540
80	36.2872	0.2903
90	40.8231	0.3266
100	45.3590	0.3629

Example: Patient weighs 38½ pounds

Dose for 30 pounds = 0.1089
8 pounds = 0.0290
½ pound = 0.0018
Dose for 38½ pounds = 0.1397 Gm. of thallium acetate

114 East Fifty-Fourth Street.

1. Vaughan, R. T., and Rudnick, D. F.: A New and Early Sign of Ruptured Bladder, J. A. M. A. **83**: 9 (July 5) 1924.

* From the Department of Dermatology and Syphilology, University and Bellevue Hospital Medical College, Service of Dr. Howard Fox.

Special Article

SOURCES OF ULTRAVIOLET RADIATION AND THEIR PHYSICAL CHARACTERISTICS

W. W. COBLENTZ, PH.D.
WASHINGTON, D. C.

In order to obtain an appreciable amount of ultraviolet radiation it is necessary to heat the radiating substance to a high temperature, 3,000 C. (5,400 F.) or higher. Since solids (e. g., metals such as tungsten) evaporate very rapidly at high temperatures, sources of ultraviolet radiation are practically confined to electric arcs between electrodes of metals, of carbon and of mercury vapor in a closed tube of quartz glass called "the burner."

The amount of ultraviolet radiation emitted by the bunsen gas flame, either with or without an incandescent mantle, is not sufficient to warrant its consideration as a therapeutic agent.

In this paper the wavelength scale used is the millimicron ($m\mu$), which is equivalent to 10 angstrom units. Thus the ultraviolet emission line of the quartz mercury vapor arc lamp, frequently mentioned in this paper, is 302 millimicrons (3,020 angstrom units). More complete data on the radiation from arc lamps[1] and on their germicidal action[2] are given in other publications.

REFLECTORS

In view of the fact that most lamps are provided with reflectors, it is relevant to emphasize that the reflector does not emit ultraviolet rays, and that it cannot put ultraviolet rays into the radiation emitted by the source. In fact, since the reflector absorbs more of the short wave length ultraviolet than of the visible and the infra-red rays, the total amount of ultraviolet radiation in proportion to the visible and the infra-red rays is relatively lower in the reflected rays than in the rays that proceed directly from the source to the object. The reflector simply increases the total amount of radiation of all wavelengths falling on an object. It cannot add ultraviolet wavelengths that are not in the source, and after it has become covered with smoke from the arc the amount of radiation reflected is greatly reduced.

THE TUNGSTEN FILAMENT LAMP

The "Mazda" tungsten filament lamp, enclosed in a bulb of special glass that transmits ultraviolet at wavelengths extending from 280 to 310 millimicrons (recognized as effective in preventing rickets), has been considered for a source of ultraviolet radiation. A small lamp, similar in appearance to the automobile headlight lamp, was on the market some time ago. It was claimed that if the lamp was operated at a considerably higher voltage than that normally used (which shortened the useful life to a few hours), it would emit sufficient ultraviolet radiation for therapeutic purposes. The lamps examined did not emit an appreciable amount of ultraviolet of wavelengths less than 310 millimicrons.

1. Coblentz, Dorcas and Hughes: Bur. Stds. Sc. Papers **21**: 535, 1926 (No. 539, 15 cents). The Bureau of Standards publications are obtainable only from the Supt. of Documents, Washington, D. C., at the prices indicated.

2. Coblentz and Fulton: Bur. Stds. Sc. Papers **19**: 641, 1924 (No. 495, 20 cents).

Recently Luckiesh [3] published calculations which indicate that the tungsten filament lamp, even when enclosed in a bulb that transmits the ultraviolet rays extending from 280 to 310 millimicrons, emits but little ultraviolet radiation of these wavelengths.

The gas-filled tungsten lamp is useful as a source of visible and of short wavelength infra-red radiation, of wavelengths less than 1,500 millimicrons. About 30 per cent of the total radiation emitted by the gas-filled tungsten lamp is of wavelengths that can penetrate deeply into the skin. The original papers cited here [4] contain data on the spectral energy distribution of the tungsten filament in a gas-filled bulb.

THE NICKEL AND THE TUNGSTEN ARC

The radiation emitted from the arc vapors between two electrodes of nickel and of tungsten consists of numerous fine lines which, as shown in chart 1, are not separated when examined with a small spectroscope.

The spectral energy distribution of the arc between two pure nickel rods, 12 mm. in diameter with tapered ends, operated on 6 amperes, is given in chart 1, from which it may be noted that the nickel arc emits strongly at 230 and especially at 350 millimicrons. These bands are especially conspicuous in certain cored carbons, discussed in a subsequent part of this paper. The arc of

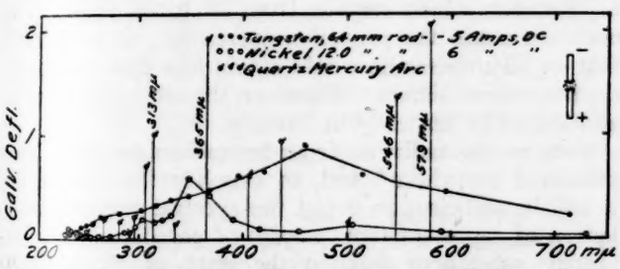

Chart 1.—Spectral energy (intensity, galvanometer deflections); distribution of the radiation emitted by the arc between electrodes of nickel, of tungsten and of mercury vapor in a quartz tube, called "the burner."

nickel-cored carbons is an excellent source of ultraviolet radiation. Moreover, the material is inexpensive, quiet burning and easy to operate.

The tungsten rods examined were 6.4 mm. in diameter and were the regular imported British stock material used for therapeutic purposes. They were operated on 5 amperes. Owing to the formation of a crust of oxide around the electrode, the arc was rather unsteady and hence difficult to operate. As shown in chart 1, the emission spectrum of tungsten is weak in the spectral region of wavelengths shorter than 230 millimicrons.

The odors from the metal arcs are disagreeable and, in view of the greater convenience in operation, cored carbon electrodes containing these metals are commonly used in place of electrodes of pure metals.

THE QUARTZ MERCURY ARC

The radiation from the quartz mercury vapor arc lamp (the "burner") is emitted, principally, in a series of intense spectral lines (chart 1) superimposed on a faint continuous spectrum that contributes but little to the total ultraviolet radiation emanating from the arc. About 6 per cent of the total radiation emitted is of wavelengths shorter than 290 millimicrons, which are entirely absent in sunlight. They have a high germicidal action.[2]

In previous investigations [5] of quartz mercury vapor burners having (1) a solid tungsten anode and (2) a liquid mercury anode, it was found that there is no appreciable difference in the ultraviolet component radiation from these two types of lamps when operated on the same energy input in the burner. Air-cooled burners operated on alternating current (through the burner) and water-cooled burners on direct current appear to have a somewhat higher ultraviolet radiation component than air-cooled direct current burners, owing to the lower temperature of the enclosure.

Aside from several strong lines in the region of from 1,000 to 1,200 millimicrons, the quartz mercury arc emits but little infra-red radiation.[6] The large amount of infra-red obtained from the tungsten anode type of burner emanates from the incandescent tungsten anode and especially (in both types) from the quartz enclosure and the hood, which emit a low-temperature, long wavelength radiation. Physically there is no comparison between this type of radiation and that of the sun, and it is hardly to be expected that these two sources will give the same results in all types of light treatment and in dye fading.

In the lamps investigated about ten years ago, the burners showed considerable blackening with usage. Since then marked improvements have been made in the construction of quartz mercury vapor lamps, which do not show the rapid discoloration with usage previously noted.[1]

THE CARBON ARC

The temperature of the surface of the sun is about 5,500 C. (about 9,900 F.). The temperature of the positive electrode of the carbon arc is much lower, about 3,300 C. (about 6,000 F.). The carbon arc is the hottest source of radiation readily obtainable, and in this respect it is the closest approach to sunlight. However, the radiation from the carbon arc is not like sunlight—far from it. There is a strong emission band in the violet, at about 389 millimicrons (the "cyanogen band"), and also beyond 4,000 millimicrons in the infra-red there is a great amount of radiation not present in sunlight. When a window of special glass (e. g., Corex D) is used which shuts out the ultraviolet rays of wavelengths shorter than 290 and longer than 4,000 millimicrons, the spectral limits are similar to those of sunlight; but the intense cyanogen band remains. Whether it is important to use a source of radiation having a spectral energy distribution similar to that of sunlight remains to be determined.

As already mentioned, the radiation from the mercury vapor arc in a quartz burner consists of a series of strong emission lines, notably at 257, 265, 280, 297, 302, 313, 334 and 365 millimicrons. In this spectral region the radiation from the vapors of the carbon arc consists of numerous fine lines which are so close that the spectrum appears continuous and, hence, somewhat like that of sunlight.

In chart 2 is shown the distribution of energy in the ultraviolet and in the visible spectrum of the sun (as observed on Mount Wilson) and of the white flame

3. Luckiesh: Elect. World **92**: 1088 (Dec. 1) 1928.
4. Coblentz, W. W.: Bur. Stds. Sc. Bull. **14**: 115, 1917 (No. 300, 5 cents). Priest: Bur. Stds. Sc. Papers **18**: 225, 1922 (No. 443, 5 cents).
5. Coblentz, Long and Kahler: Bur. Stds. Sc. Papers **15**: 1, 1918 (No. 330, 5 cents). Coblentz and Kahler: Bur. Stds. Sc. Papers **16**: 233, 1920 (No. 378, 5 cents).
6. Coblentz, W. W.: Bur. Stds. Sc. Bull. **9**: 96, 1912 (No. 191, 10 cents).

carbon arc. For convenience in making these comparisons, the radiation intensities (the galvanometer deflections) of the sun and of the carbon arc were set to equality at 300 millimicrons, which procedure is permissible.

No appreciable radiation of the sun of wavelengths less than 290 millimicrons is transmitted by the earth's atmosphere. On the other hand, radiation of wavelengths out to 220 millimicrons is observable in the white flame carbon arc. As illustrated in chart 2, the

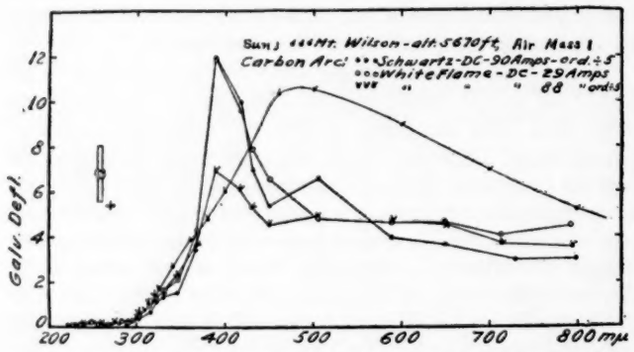

Chart 2.—Spectral energy (intensity) distribution of the sun and of the carbon arc.

violet cyanogen band at 389 millimicrons is relatively far more intense than similar wavelengths in the spectrum of the sun. On the other hand, under the same conditions, the radiation of the sun in the visible spectrum is relatively far more intense than obtains in the white flame carbon.

Except for the violet "cyanogen" band at 389 millimicrons, the electrodes of pure carbon are quite nonluminous. As is well known, by using cored carbons filled with various substances, a highly luminous arc is produced.

Superimposed on the radiation from the arc vapors is the continuous spectrum from the highly incandescent crater of the positive electrode. The result is an intense infra-red spectrum, of wavelengths longer than the solar rays transmitted by the atmosphere. If the arc is surrounded with a glass or quartz globe, as already mentioned, some of the infra-red rays are excluded; but in turn the surrounding globe becomes heated and emits infra-red rays. Hence, no exact comparison can be made between the radiation from the sun and the carbon arc.

The crater of the positive electrode emits an intense white light which, as already mentioned, is mixed with the radiation of the arc vapors. This fact is usually overlooked in discussions of the radiation from the carbon arc. The vapors from the pure carbon arc contribute but a small amount to the total radiation emitted.

When the carbon arc is enclosed with a close-fitting chimney, the gases surrounding the arc expand and force sufficient air out of the chimney to establish an equilibrium in pressure; viz., atmospheric pressure. The amount of oxygen is reduced and the life of the electrode is prolonged. When the arc is extinguished, cold air rushes in. This does not mean, however, that the arc was operating under reduced pressure; i. e., a partial vacuum. The pressure was the same as or slightly above the atmospheric pressure, but the volume of air was reduced.

It has been found [1] that the radiation from the carbon arc depends on (1) the size and the kind of the electrodes (white flame, blue flame, yellow flame, red flame); (2) the direction of the current when direct current is used through combinations of neutral cored and impregnated carbons, and (3) the amount of electric current.

This information has been of assistance in making improvements in arc lamps. Assuming that the manufacturer has incorporated into his lamp the latest improvements based on the information available regarding the proper current, the proper size of electrode for a given current, and the direction of the current (if direct current) through the electrodes, it is incumbent on the purchaser of such a lamp to operate it as was intended. This is evident from the increase in the intensities (the galvanometer deflections) of the different wavelengths with increase in the current (hence the temperature) in the arc, illustrated in chart 3. These curves are called "isochromatics," meaning at some particular wavelength. Take, for example, the curve of intensities for the wavelength 302 millimicrons, which is of especial interest because of its strong antirachitic action. On 5 amperes the galvanometer deflection was hardly perceptible. On from 25 to 30 amperes the intensity (the galvanometer) was almost 100 times greater. Suppose the operator is using carbon electrodes about 12 mm. in diameter, which require from 25 to 30 amperes in order to attain the proper temperature. It is evident that on 10 amperes he would obtain less than one-tenth the intensity available. Moreover, the arc would sputter and would be unsteady in burning.

Data on the radiation from the carbon arc have been published elsewhere [7] and, to simplify the discussion, it will be sufficient to depict the spectral energy distribution of representative samples of cored carbons containing substances that, in the state of incandescent vapor, have bands of selective emission in certain parts of the spectrum. These spectral energy curves, throughout the ultraviolet, the visible (390 to 750 millimicrons) and to 800 millimicrons in the infra-red spectrum, are illustrated in chart 4. The inset on the left-hand side of chart 4 gives a magnified (ten times) illustration of the intensities extending from 200 to 300 millimicrons.

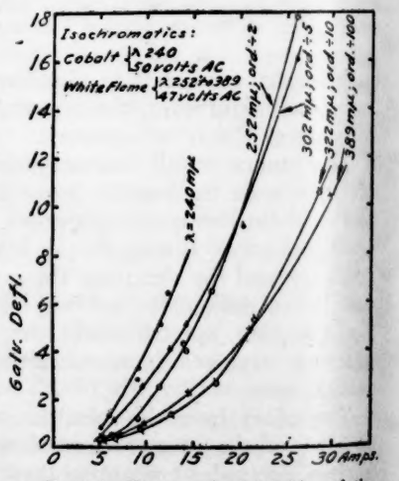

Chart 3.—Increase in intensities of the emission lines in the carbon arc with increase in current.

The carbon electrodes used were 12.7 mm. in diameter and were operated on 30 amperes, alternating current. The effect of direct current is to raise the temperature of one electrode considerably higher than the average that obtains when alternating current is used. This increases the intensity of the cyanogen band at 389 millimicrons, especially in the blue flame arc, but it does not have so marked an effect on the

7. Coblentz, W. W.: Tr. Illum. Engin. Soc. **23**: 247 (March) 1928. Coblentz, Dorcas and Hughes (footnote 1).

intensity of the radiation in the short wavelength ultraviolet, and in visible spectrum.

In chart 4, it may be noticed that in the neutral core carbon arc (a practically pure carbon), the ultraviolet radiation of wavelengths less than 320 millimicrons is extremely weak, the radiation being concentrated almost entirely in the cyanogen band, with a maximum at 389 millimicrons. In contrast, in the blue flame carbon arc, the ultraviolet radiation of wavelengths less than 310 millimicrons exceeds that of all the other arcs illustrated in chart 4.

In the yellow flame carbon arc there is considerable more radiation, extending from 290 to 320 millimicrons, in the ultraviolet, which is weak in the neutral core carbon arc. In the visible spectrum there is a strong emission extending from 500 to 750 millimicrons.

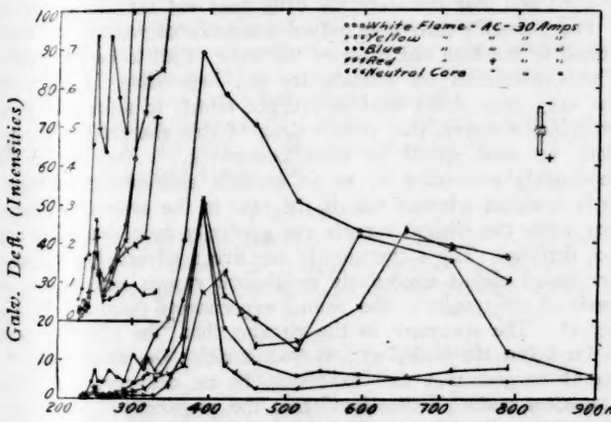

Chart 4.—Spectral intensity (energy) curves of different kinds of carbon electrodes.

The red flame carbon arc is conspicuous for its intense emission extending from 550 millimicrons in the orange beyond 750 millimicrons in the red.

The white flame carbon arc is conspicuous for its relatively low spectral emission in the ultraviolet of wavelengths shorter than 290 millimicrons, its high emission in the region extending from 300 to 340 millimicrons (nickel in chart 1), and its high emission in the region extending from 450 to 500 millimicrons, which is lacking in the other carbon arms just described. As illustrated in chart 2, owing to the intense radiation in the cyanogen band at 389 millimicrons, the color of the light emitted by the white flame carbon is a more bluish white than sunlight. However, as already mentioned, when the arc is covered with a suitable glass chimney which absorbs the ultraviolet rays shorter than 290 millimicrons and the infra-red rays longer than 4,000 millimicrons, the white flame carbon arc is the closest approach to sunlight. But it is still far from being an exact match with sunlight in spectral energy distribution. As already mentioned, it remains to be determined whether this difference in spectral energy distribution is of importance biologically.

Disordered Bowel Movement.—Constipation is one of the commonest of complaints. To the lay mind it means misery, mental and physical, because of real or fancied lack of relief from pathological complexes by the evacuation of fecal contents. This is a problem in medicine because it involves the heritage of misconceptions, amplified by propaganda of health restaurants, and of diet specialists. "Constipation" is a rather meaningless term and should be considered under the general head of "Disordered Bowel Movement."—Gilbert, Q. O.: The Spastic Colon, *California & West. Med.*, May, 1929.

Council on Pharmacy and Chemistry

NEW AND NONOFFICIAL REMEDIES

THE FOLLOWING ADDITIONAL ARTICLES HAVE BEEN ACCEPTED AS CONFORMING TO THE RULES OF THE COUNCIL ON PHARMACY AND CHEMISTRY OF THE AMERICAN MEDICAL ASSOCIATION FOR ADMISSION TO NEW AND NONOFFICIAL REMEDIES. A COPY OF THE RULES ON WHICH THE COUNCIL BASES ITS ACTION WILL BE SENT ON APPLICATION.

W. A. PUCKNER, Secretary.

INSULIN-SQUIBB (See New and Nonofficial Remedies, 1928, p. 207).

The following dosage form has been accepted:

Insulin-Squibb, 80 units, 10 cc.: Each cubic centimeter contains 80 units.

DIPHTHERIA TOXOID (See THE JOURNAL, Aug. 4, 1928, p. 321).

Parke, Davis & Co., Detroit.

Diphtheria Toxoid.—Prepared from diphtheria toxin of which the L+ dose is 0.25 cc. The toxin is treated with formaldehyde according to the specifications of the U. S. Public Health Service until it is detoxified so that 5 cc. (5 minimum human doses) injected into 300 guinea-pigs will not produce signs of toxic poisoning. It is tested for antigenic power by subcutaneous injection of 0.5 cc. into ten 300 gram guinea-pigs. After thirty days the animals are injected with 5 M. L. D. of diphtheria toxin and the product is considered satisfactory if 80 per cent survive. Diphtheria toxoid-P. D. & Co. is marketed in packages (Bio 2100) containing one bulb (0.5 cc.) of dilute diphtheria toxoid for the reaction test and two bulbs (0.5 and 1.0 cc., respectively) of diphtheria toxoid; also in hospital packages (Bio 2102) containing two bulbs of dilute diphtheria toxoid for the reaction test (0.5 cc. each) and twenty bulbs of diphtheria toxoid (ten of 0.5 cc. and ten of 1.0 cc.)

Dosage.—For the reaction test, 0.1 cc. of dilute diphtheria toxoid intradermally; for immunization, two doses (0.5 and 1.0 cc.) of the diphtheria toxoid subcutaneously, with an interval of three or four weeks between injections.

LIQUID PETROLATUM (See New and Nonofficial Remedies, 1928, p. 235).

The following dosage form has been accepted:

Petrolagar (with Milk of Magnesia): Liquid petrolatum, 65 cc.; magnesia magma, 8 cc.; emulsified with agar in a menstruum containing sugar, flavoring, sodium benzoate 0.1 Gm., and water to make 100 cc.

Prepared by the Deshell Laboratories, Inc., Chicago. No U. S. patent. U. S. trademark 165,616.

PRELIMINARY REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING PRELIMINARY REPORT.

W. A. PUCKNER, Secretary.

CORAMINE-CIBA

Coramine-Ciba was presented for consideration of the Council as pyridine-β-carbonic acid diethylamide, proposed for use as a circulatory stimulus in cardiac failure, surgical shock, narcotic poisoning and respiratory failure. The product is marketed as Coramine Liquid, a 25 per cent solution for oral, subcutaneous, intramuscular and intravenous administration.

The Ciba Company, Inc., supplied specimens of Coramine and of the 25 per cent solution, Coramine Liquid; these were referred to the A. M. A. Chemical Laboratory for the purpose of verification of the chemical composition and claims. The Laboratory reported that it has been able in a general way to confirm the chemical claims but that the method given for the determination of Coramine in Coramine Liquid is not satisfactory. Further information was requested from the Ciba Company, Inc., and this request was referred to the parent house in Switzerland.

Eleven reprints were submitted by the firm in support of the claims made; four of these refer to animal experiments, six to clinical results and one to both. The experiments reported in Faust's paper (*Lancet* **1**:1336 [June 27] 1925) are the same as those described in Uhlmann's paper (*Ztschr. f. ges. exper. Med.* **43**:556, 1924), although this fact is not stated and most writers have considered them to be separate and independent researches. These two papers and one by Asher seem to show that the drug increases the rate of respiration and amount of air breathed, especially in cases in which the respiration has been depressed by morphine or magnesium sulphate. Experiments on frogs and mammals also showed improved heart beat and in mammals a rise of blood pressure. Two of the curves in Uhlmann's paper showing a rise of blood pressure are not

very satisfactory: in both the rise was very abrupt and in one there were marked irregularities suggesting that a convulsive dose had been given; very little of the curves are reproduced and there is no statement as to the duration of the rise.

Asher (*Schweiz. med. Wchnschr.*, 1926, number 23) seems to have obtained a rise of blood pressure without convulsions only in deeply narcotized animals. (A physician might want to raise the blood pressure in patients other than those deeply poisoned by magnesium sulphate or chloroform. The Council's referee injected 10 mg. of Coramine into a cat under paraldehyde; there was a slight, brief increase in the rate of respiration; 20 mg. caused a slight fall followed by a slight rise of pressure; a second injection of 20 mg. caused the blood pressure to fall to less than one half. In a chloralized and nicotinized cat—under artificial respiration—doses of Coramine up to 100 mg. had no effect on the blood pressure, whereas epinephrine caused a big rise; Uhlmann reported that Coramine has a direct stimulating action on blood vessels.)

The papers by Schübel (*Klin. Wchnschr.*, 1925, number 47) and Frommel (*Schweiz. med. Wchnschr.* **57,** number 3, 1927) on the pharmacology of the compound are incomplete or unimportant and not worth considering: Schübel states that no tolerance is developed in animals (no details) and Frommel states that the guinea-pig heart, studied by the electrocardiograph, shows a tachycardia with a shortening of the P-R interval and that this effect is diminished by "section of the vagi and cervical sympathetic" and concludes that "Coramine has the advantage of acting both on the extrinsic nerves of the heart and upon the intracardiac conductivity and excitability."

In 1925 there appeared a thesis by Cart from the Pharmacological Institute of the University at Basel (Dr. A. Jaquet); no reference is made to this paper by Asher, whose paper was published in 1926, nor by the firm. Cart quotes from a thesis by E. Lazier (Laboratory of Experimental Therapeutics, Geneva, 1922); no mention of this work is made by the firm or by Faust, Uhlmann or Asher. Cart quotes Lazier as finding that the action of Coramine on the blood pressure of rabbits is minimal or nil except in convulsive doses; however, he quotes Lazier as having found that Coramine injected into a nephrectomized rabbit caused the blood pressure to return to normal. On the other hand, Coramine had no effect on the blood pressure of a rabbit after chloral; epinephrine and strychnine were active. Cart found camphor to be more effective in stimulating the frog heart depressed by chloral than was Coramine. He also found a preparation of camphor to be active in causing a rise of blood pressure when Coramine was inactive. Cart also found this preparation of camphor to be far more effective in stimulating the respiration, depressed by chloral and morphine, than was Coramine. Cart states that he agrees with Lazier: that Coramine, as an analeptic and vasoconstrictor, is inferior to camphor, strychnine and caffeine and that the term "soluble camphor" should not be applied to Coramine. These experiments of Cart seem to be at least as conclusive as those submitted by the firm and it is inconceivable that the firm is not familiar with them.

As to the clinical results: Hirsch of Breslau (*Klin. Wchnschr.*, 1926, number 19) reports marked improvement in respiration and disappearance of cyanosis in a number of cases of children with pneumonia, empyema, etc.; also an improvement in the appetite when given in milk. Dobrowolska (*Pedjatrja Polska* **7,** number 6, 1927) reports similarly favorable results in eleven cases of pneumonia in children. Both authors emphasize the superiority of Coramine to camphor. Few details are given in these papers, but they make a rather favorable impression.

Faust reports on nine cases in which the drug was "used with success"—where and by whom not stated. The reports on several cases are so brief and incomplete that it is impossible to determine how much of the improvement reported was due to rest. In other cases (case 1, for example) unfavorable symptoms returned when the treatment was discontinued and immediate improvement occurred when the administration of Coramine was resumed. In two other cases also (7 and 8) improvement of the symptoms was said to have occurred immediately after the injection and to have been maintained.

Petschacher (*München. med. Wchnschr.*, 1928, number 11, p. 476) states that he has used the drug in a large number of cases at the medical clinic at Innsbrück; these included not only cases of heart disease but various infections—pneumonia, nephritis, etc.—in which there were cardiac complications; from 50 to 60 drops (presumably of the 25 per cent solution) were given by mouth three times daily. He admits the difficulty of drawing conclusions as to the effects of drugs and selects a group of cases with valvular disease in which he thinks the results were especially clear and in which he thought such factors as rest were duly considered. Among the results recorded was a marked diuresis; thus in one case with a constant fluid intake of 1 liter a day the urine increased in a few days from 600 to 3,800 cc. and the patient's weight fell from 73 to 55.75 Kg. When the drug was discontinued, edema, etc., reappeared but diuresis was again secured by the administration of Coramine.

A paper by Valery (*La clinique*, October, 1927) on five cases is less convincing.

The paper by Eisner (*Schweiz. med. Wchnschr.* **57,** number 24, 1927) simply shows that conduction in the heart is not delayed and that therefore the drug does not act like digitalis.

The Council's referee examined a number of reports not submitted by the firm and reported the tenor of all to be favorable. The experiments on animals are not impressive, in view of the very large doses used to produce effects in animals. It is probable, however, that with a drug of this character observations on man would be most convincing, if they could be thoroughly controlled so as to exclude spontaneous changes. It is doubtful whether this is the case in the present instance, and while the clinical reports are generally favorable, they are not decisive. The statements in the firm's advertising circular are based almost exclusively on clinical results and no use is made of the results of the animal experiments discussed in this report. The statement in the circular that "the effective dose is far below the toxic," etc., is questionable; the animal experiments suggest that the "far" may be an exaggeration. The statement under "Indications" that the preparation gives "prolonged" cardiac and respiratory stimulus is not established by the evidence.

The Council voted to postpone action on Coramine-Ciba to await further experimental and clinical evidence which may establish its usefulness and to publish this report bringing out the experimental status of the product.

REPORTS OF THE COUNCIL

THE COUNCIL HAS AUTHORIZED PUBLICATION OF THE FOLLOWING REPORT.

W. A. PUCKNER, Secretary.

ELIXIR KACYAN McNEIL AND TABLETS KACYAN McNEIL NOT ACCEPTABLE FOR N. N. R.

The Council decided not to admit potassium sulphocyanate to New and Nonofficial Remedies because the evidence for its therapeutic value is inconclusive. However, in view of the several reports on the use of the drug in those cases in which reduction in pressure is clinically desirable, the Council holds that further consideration should be given the drug and voted to publish this report, stating the limitations of therapy with potassium sulphocyanate, namely: that the evidence for its value is far from conclusive; that in many patients the production of lowered pressure does more harm than good; and that its use is contraindicated in acute inflammation of all types, in nephritis and in marked renal insufficiency.

Elixir Kacyan McNeil and Tablets Kacyan McNeil are the proprietary names under which Robert McNeil, Philadelphia, markets preparations of potassium sulphocyanate. The first preparation contains 8 grains of the drug to each fluidounce and the second contains 1 grain in each 3 grain tablet. The preparations are recommended for use in hypertension.

The Council declared Elixir Kacyan McNeil and Tablets Kacyan McNeil unacceptable for New and Nonofficial Remedies because the evidence for the value of potassium sulphocyanate is inconclusive and because the marketing of this drug under a proprietary name is contrary to the interests of rational therapy.

REPORTS OF OFFICERS

NOTE.—At the 1925 session of the Association, the House of Delegates suggested that all reports of officers, committees, etc., and resolutions to be brought before the House, if available, be published in advance of the session so as to permit careful consideration and discussion. — Ed.

REPORT OF SECRETARY

To the Members of the House of Delegates of the American Medical Association:

The following annual report of the Secretary is respectfully submitted to the House of Delegates:

MEMBERSHIP

The enrolled membership of the Association on May 1, 1929, was 98,307, as compared with 96,152 on the corresponding date in 1928, and with 96,443 on April 1, 1928, as reported to the House of Delegates at the last annual session.

The number of members in each of the states and territories, as recorded in the office of the Secretary on May 1, 1929, is shown in an accompanying table.

FELLOWSHIP

The Fellowship roster on May 1, 1924, carried 54,063 names. The number of Fellows has increased by about 2,000 each year for the last five years. On May 1, 1929, the number of Fellows enrolled was 64,915.

THE NEED FOR COMPACT AND EFFICIENT ORGANIZATION

The medical profession, in common with all other groups of society, is feeling the strain of a great transitional stage in the life of our country. In some ways physicians are being subjected to greater pressure and stress than any other group. The tendency of government toward paternalism, the restrictions imposed by legislative enactments and by bureaucratic regulations, the establishment of great funds and foundations ostensibly benevolent in character interested primarily in medical care, the trend of modern business with its instalment plans and high pressure salesmanship, the propagation of half-baked theories, semitruths and positive misinformation through the public press and even through periodicals designed for physicians, a flood of loose talk without regard for fact and, it may be, the disposition on the part of a minor element of the profession to commercialize the practice of medicine and to depart from ideals and traditions, established through the ages, that have made possible the progress and the achievements of scientific medicine —all these are factors in the situation that exists today in which the medical profession finds itself the object of much criticism that is not deserved and the recipient of many suggestions for its conduct. Much of this may be helpful but a great mass represents considerations which physicians know are unpractical or even dangerous.

There has never been a time when there was greater need for compact and efficient organization of the physicians of this country than exists now. Our own plan of organization is comprehensive and, in most particulars, entirely sufficient if put into proper operation and carried out with reasonable efficiency. This cannot be done if the dissipation of effort and the conflict of interest occasioned by the existence of a multitudinous number of independent medical organizations are to be continued. The number of these independent groups can be materially reduced with benefit to the cause of scientific medicine and, consequently, with benefit to the individual physician and to the public. They are maintained for the most part by our own members who could contribute more to the common good through the county medical society, the state medical association and the American Medical Association as the fundamental and necessary organization of physicians in the United States. The inordinate number of medical meetings occasioned by the existence of so many societies, the frequency of hospital staff meetings, on which attendance is compulsory under rules established by others than those who must attend, glorified as many of these staff meetings are into scientific societies, will sap the vitality of the county medical societies and make it impossible for the regularly organized profession to deal with problems that are pressing for solution and that cannot be controlled through any other agency.

Organization of Constituent State Associations

	Number Counties in State	Component Societies in State	Number of Counties in States Not Organized		Number of Physicians in State (10th Ed. Directory)	Number of Members of State Associations		Number A. M. A. Fellows in State
			1928	1929		1928	1929	
Alabama	67	67	..	..	2,254	1,719	1,729	595
Arizona	14	11	..	..	393	234	243	188
Arkansas	75	63	12	12	2,103	1,145	1,074	485
California	58	40	15	15	8,854	4,536	4,770	3,572
Colorado	63	24	30	30	1,805	1,119	1,148	782
Connecticut	8	8	..	..	1,966	1,303	1,351	915
Delaware	3	3	..	..	251	157	170	110
Dist. Columbia	..	..	..	..	1,848	582	601	515
Florida	66	36	20	19	1,787	1,095	1,134	551
Georgia	161	105	40	38	2,935	1,771	1,842	755
Idaho	44	12	1	1	401	240	183	125
Illinois	102	91	8	8	10,803	7,415	7,291	5,517
Indiana	92	81	4	4	4,164	2,785	2,792	1,665
Iowa	99	96	1	1	3,302	2,254	2,366	1,538
Kansas	105	61	38	38	2,296	1,647	1,660	936
Kentucky	120	111	7	7	2,971	1,901	1,904	826
Louisiana	64	42	20	20	2,039	1,300	1,301	768
Maine	16	15	1	1	1,029	788	793	389
Maryland	24	22	2	2	2,387	1,260	1,278	849
Massachusetts	14	18	2	2	6,242	4,409	4,518	2,983
Michigan	83	54	7	7	5,145	3,366	3,543	2,191
Minnesota	87	36	5	5	2,982	2,160	2,223	1,792
Mississippi	82	21	6	6	1,680	1,020	851	372
Missouri	115	90	16	16	5,713	3,263	3,312	2,137
Montana	56	17	26	25	507	333	338	228
Nebraska	93	53	23	23	1,846	1,270	1,009	822
Nevada	17	3	14	14	129	96	91	60
New Hampshire	10	10	..	..	584	498	510	274
New Jersey	21	21	..	..	3,755	2,329	2,643	1,796
New Mexico	31	13	18	18	357	227	226	145
New York	62	60	1	1	18,634	11,446	12,144	8,669
North Carolina	100	87	7	8	2,328	1,769	1,839	761
North Dakota	53	14	9	9	497	405	426	308
Ohio	88	87	..	..	8,287	5,390	5,522	3,402
Oklahoma	77	62	14	14	2,458	1,673	1,628	877
Oregon	36	14	4	4	1,225	587	602	400
Pennsylvania	67	63	4	4	11,405	7,816	7,975	5,350
Rhode Island	5	6	1	..	779	445	455	348
South Carolina	46	42	6	1	1,309	835	845	393
South Dakota	69	13	11	11	603	382	384	284
Tennessee	95	71	19	19	3,016	1,731	1,755	798
Texas	254	136	78	76	6,123	3,694	3,789	2,188
Utah	29	8	22	20	516	405	384	265
Vermont	14	10	3	3	529	356	351	198
Virginia	100	52	25	25	2,506	1,850	1,856	931
Washington	39	20	18	17	1,807	1,259	1,338	784
West Virginia	55	27	4	5	1,747	1,087	1,132	659
Wisconsin	71	51	1	1	2,896	2,172	1,992	1,576
Wyoming	24	8	14	14	238	145	141	108
Alaska	..	..	..	..	55	17	16	8
Hawaii	5	4	1	1	250	144	150	73
Porto Rico (Districts)	7	7	..	..	338	251	262	65
Canal Zone	..	..	..	..	133	102	114	26
Philippine Islands (Provinces)	56	8	50	48	982	260	313	53
Foreign	..	..	..	..	.....	.....	.....	150
Total	3,133	2,074	608	594	151,229	96,443	98,307	62,535
Commissioned Officers, Honorary and Affiliate Fellows								2,380
								64,915

In one city, with a medical population of less than five hundred, thirty-three meetings are scheduled in one month, twenty-nine of them staff meetings. In another city, with less than nine hundred physicians, including nonmembers, twenty-three meetings are scheduled in one week, eight of them staff meetings. These examples are typical of a national situation.

In practically all instances, the members of independent organizations are the members of the component county medical societies. The work of the one group must be done by the very men that must be depended on by the other. Why cannot the regular organization meet all the needs of its members, since whatever is done must be done by them? If there is need for special programs, why can they not be arranged for by the county society and the state association and the national organization as a part of their own broad programs of work?

There are problems arising out of more or less revolutionary conditions of the times that cannot be effectively solved except through the agency of organized medicine. There are others that will be solved only through the processes of evolution, although efforts are constantly being made to deal with them by the application of revolutionary methods. There is great need for well considered action on the part of a unified profession looking toward the solution of those problems that are susceptible of solution through human agency. It is equally important that there shall be no ill considered action in attempting to deal immediately and finally with those problems that will be worked out only through the process of time. There is need, also, for combating the efforts of agitators who set up windmills on which they can break their lances, who create great furor over pseudoproblems, and thus detract attention from important matters that should receive earnest and persistent consideration.

The urgent demand of the time is for unified action and for expression through a great voice that will speak authoritatively for the entire profession of medicine in the several states and in the United States. This demand can be properly met through unity that is possible only as the profession is compactly organized. Its attention must be centralized, without undue division of fealty and without unnecessary waste, on those responsibilities and duties that naturally devolve on the profession in its organized capacity, and that heretofore have always been discharged with credit and honor.

RESOLUTIONS AND AMENDMENTS

RESOLUTIONS

The following resolutions have been sent to the Secretary by Dr. Burt R. Shurly, Detroit, for submission to the House of Delegates:

1. WHEREAS, The medical profession has provided definite rules and regulations for members of the American Medical Association in regard to advertising and publicity, and

WHEREAS, Some hospitals, municipal and otherwise, have advertised special and wonderful cases in the daily press and have given to the public stories of their special excellence and efficiency as compared with other hospitals in the neighborhood, therefore be it

Resolved, That these advertisements be specially collected, and presented to the Committee on Medical Education and Hospitals, and that this question of hospital advertising be given due consideration and reported to the House of Delegates at the next annual meeting and the rating of hospitals be affected according to the unethical advertising published.

2. WHEREAS, The secretaries of sections of the American Medical Association have been expending liberally of their own funds and call for donations from members of the sections in order to finance the preparation of the annual program, therefore be it

Resolved, That an honorarium of an additional hundred dollars be sent to each secretary annually to cover the actual expenses involved in the preparation of the program and the presentation of the same at the annual meeting.

3. WHEREAS, It has been an unwritten law and agreement that papers read before the sections, certified with proper approval by the executive committee of the section, shall be published in THE JOURNAL, and

WHEREAS, Some of the papers have been refused publication in THE JOURNAL under the authority of the editor of THE JOURNAL, and

WHEREAS, these papers have been prepared and read at a great expense of time and energy, involving frequently many thousand miles of travel to present them in person before the sections, therefore be it

Resolved, That the Board of Trustees be authorized to prepare a supplement to THE JOURNAL as may be necessary to comply with the unwritten law and the agreement made with the writers of papers that those certified be published in THE JOURNAL.

The following resolution will be submitted by Dr. Joseph F. Smith, Wisconsin:

WHEREAS, There exists among the medical profession very little definite information regarding the various types of apparatus and modalities used in physical therapy, and

WHEREAS, The mode of action and the effects of these different forces and modalities are very little known to medical men generally, the principal source of information on this subject being publications of concerns interested in selling apparatus, and

WHEREAS, There already exists a body known as the Council on Physical Therapy which is abundantly capable of giving the information needed by the medical men who use these various types of apparatus, therefore be it

Resolved, That the Board of Trustees of the American Medical Association be hereby petitioned to have prepared by the Council on Physical Therapy a short, concise digest or booklet in which is set forth the basic principles underlying the employment of these various physical agents and, so far as known, their mode of action on living tissue and to publish the same in a form which will be available to the members of the medical profession.

AMENDMENT TO BY-LAWS

It seems desirable that the administrative head of the Bureau of Legal Medicine and Legislation shall have the title "Director" rather than "Executive Secretary." It is proposed that section 4, chapter X, of the By-Laws be amended by substituting the word "Director" for the words, "Executive Secretary," in the paragraph numbered (4) of said section.

IN APPRECIATION

As in previous years, the Secretary has been the beneficiary of most considerate and helpful kindnesses and assistance at the hands of all of the officers of the Association, members of the House of Delegates, officers of constituent state medical associations and component county medical societies, and from hundreds of members and Fellows. For the encouragement and help thus received, grateful acknowledgment is made.

OLIN WEST, Secretary.

REPORT OF THE BOARD OF TRUSTEES

To the Members of the House of Delegates of the American Medical Association:

The Journal of the American Medical Association

During 1928, THE JOURNAL continued to hold its place as the leading general medical periodical of the world. The policy has been to keep readers abreast of scientific progress by the publication of original contributions of importance, editorial discussions of articles appearing in more technical publications, and carefully made abstracts; to publish the news of modern medicine in various departments, and to provide readers with service through Queries and Minor Notes, the book reviews, and the Medical Education and Medicolegal departments. The foreign correspondence has been elaborated through contributions from direct representatives from Australia, Poland, Russia and Scandinavian countries.

The campaign of THE JOURNAL for honest scientific medicine has been continued with the same vigor that has animated its policy since 1905. Through its pages the various councils have been given full support, and special efforts have been made to meet the expansion of quackery into such new fields as the radio, plastic surgery and medical cultism.

THE JOURNAL continues to enjoy the confidence of the American press and of the leading public welfare agencies.

The total circulation of THE JOURNAL, Jan. 1, 1929, was 96,932. The total number of copies printed in 1928 was 5,042,480, more by 116,303 than in 1927, though there were fifty-three weekly issues in 1927 and only fifty-two in 1928.

Table 1 presents an approximate count of Fellows and Subscribers to THE JOURNAL by states, Jan. 1, 1929. It also indicates the gain and loss in each state during 1928, and includes copies for the army and the navy. The net gain for the year was 2,649

Table 2 gives the number of physicians (based on the Tenth Edition of the American Medical Directory) in the United States, the number receiving THE JOURNAL, and the approximate percentage in each state. Copies to physicians in the United States Army and United States Navy are not included.

FIELD WORK OF THE EDITOR

During 1928, the editor of THE JOURNAL and of HYGEIA delivered seventy-three addresses in twenty-nine cities, the majority in Chicago and in neighboring communities. These addresses included attendance at four state medical society meetings and twenty-four other medical organizations; the remaining addresses were delivered before public audiences, including forums, women's clubs, church congregations, teachers, nurses and universities. The addresses to the public, since they were limited to large groups, reached approximately 50,000 people.

American Medical Directory

The total number of copies of the Tenth Edition of the American Medical Directory sold to Dec. 31, 1928, was 8,200. The net loss on this publication as of Jan. 1, 1929, was $96.24, which will probably be effaced when unpaid subscriptions are collected.

TABLE 1.—*Approximate Count of Fellows and Subscribers on The Journal Mailing List, Jan. 1, 1929; Also Gain or Loss During 1928*

State	Fellows	Subscribers	Totals	Gain for Year	Loss for Year
Alabama	564	279	843	39	..
Arizona	179	102	281	1	..
Arkansas	452	248	700	16	..
California	3,450	2,406	5,856	226	..
Colorado	741	343	1,084	..	13
Connecticut	902	490	1,392	23	..
Delaware	105	57	162	6	..
District of Columbia	508	433	941	..	4
Florida	580	333	913	..	45
Georgia	736	416	1,152	7	..
Idaho	110	119	229	..	4
Illinois	5,283	2,832	8,115	94	..
Indiana	1,577	738	2,315	..	12
Iowa	1,456	548	2,004	..	7
Kansas	900	361	1,261	39	..
Kentucky	765	379	1,144	42	..
Louisiana	711	284	995	..	4
Maine	378	148	526	1	..
Maryland	835	619	1,454	45	..
Massachusetts	2,852	1,493	4,345	187	..
Michigan	2,077	1,280	3,357	147	..
Minnesota	1,603	648	2,251	136	..
Mississippi	344	198	542	8	..
Missouri	2,016	985	3,001	125	..
Montana	210	121	331	9	..
Nebraska	764	415	1,179	..	11
Nevada	59	32	91	..	..
New Hampshire	270	67	337	..	1
New Jersey	1,794	1,109	2,903	169	..
New Mexico	137	82	219	..	1
New York	8,122	5,413	13,535	1,028	..
North Carolina	720	414	1,134	4	..
North Dakota	264	120	384	23	..
Ohio	3,236	1,697	4,933	57	..
Oklahoma	781	291	1,072	..	32
Oregon	365	408	773	25	..
Pennsylvania	5,227	2,509	7,736	226	..
Rhode Island	335	165	500	9	..
South Carolina	371	220	591	..	5
South Dakota	249	122	371	7	..
Tennessee	741	450	1,191	45	..
Texas	1,975	848	2,823	..	4
Utah	236	91	327	12	..
Vermont	198	110	308	..	8
Virginia	884	504	1,388	..	42
Washington	728	401	1,129	27	..
West Virginia	625	333	958	..	28
Wisconsin	1,469	621	2,090	84	..
Wyoming	105	52	157	3	..

The Eleventh Edition of the Directory is now in the press and will probably be available for distribution during the latter part of April or early in May. An innovation will be made in this edition in that the size of the page will be changed from 7½ by 10¼ inches to correspond with the size of the page of THE JOURNAL, which is 8½ by 11⅜. This change has been decided on in order that it may be possible to print the Directory on rotary presses with considerable saving in time and possibly with a small saving of money. In order that the costs involved in this change may not be excessive, there will be some typographic inequalities in this and probably in the next succeeding edition of the Directory, but it is believed that these will not be particularly objectionable and will entirely disappear with the next or the second edition hereafter.

Some notable changes are to be made in the presentation of certain data in the Eleventh Edition. The list of licentiates of the National Board of Medical Examiners will be discontinued and the data heretofore presented in that list will be inserted for each licentiate following his name in the body of the Directory. The list of diplomates of the American Board for Ophthalmic Examinations and of the American Board of Otolaryngology will be dropped from the front section of the Directory and will appear under a special classification. A new feature will be the appearance in the Directory of a "Foreign List" of physicians which will include the names of American physicians temporarily located in foreign countries for purposes of study or who are engaged as medical missionaries or who are abroad for other reasons.

More than 5,000 advance orders for the Eleventh Edition of the American Medical Directory were recorded on Dec. 31, 1928.

The Spanish Edition

Publication of the Spanish Edition of THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION was permanently suspended after the issue for Dec. 15, 1928. Decision to suspend this publication was reached with some reluctance, but there was doubt that the publication was accomplishing the purpose for which it was originally intended, and much difficulty was encountered in securing the services of competent editors and translators.

A number of physicians in Central and South America, who formerly subscribed to the Spanish Edition, have entered regular subscriptions for THE JOURNAL.

The net loss incurred through publication of the Spanish Edition in 1928 was $6,537.73, half of which was borne by the Rockefeller Foundation, whose cooperation has been enjoyed since the inception of this publication.

Advertising Department

As will be seen by reference to the financial report, the income from the sale of space in the advertising columns of THE JOURNAL and other publications of the Association has been very satisfactory. From this source the major part of the total income of the Association is derived.

TABLE 2.—*Physicians Receiving The Journal*

State	Number Receiving Journal	Physicians in State (10th A. M. A. Directory)	Approximate Percentage Receiving Journal
Alabama	843	2,254	37
Arizona	281	393	71
Arkansas	700	2,103	33
California	5,856	8,854	66
Colorado	1,084	1,805	60
Connecticut	1,392	1,966	71
Delaware	162	251	64
District of Columbia	941	1,848	51
Florida	913	1,787	51
Georgia	1,152	2,935	39
Idaho	229	401	57
Illinois	8,115	10,893	74
Indiana	2,315	4,164	55
Iowa	2,004	3,302	60
Kansas	1,261	2 296	54
Kentucky	1,144	2,971	38
Louisiana	995	2,039	49
Maine	526	1,029	51
Maryland	1,454	2,387	60
Massachusetts	4,345	6,242	69
Michigan	3,357	5,145	65
Minnesota	2,251	2,982	75
Mississippi	542	1,680	32
Missouri	3,001	5,713	52
Montana	331	507	60
Nebraska	1,179	1,846	64
Nevada	91	129	70
New Hampshire	337	584	58
New Jersey	2,903	3,755	77
New Mexico	219	357	61
New York	13,535	18,634	72
North Carolina	1,134	2,328	49
North Dakota	384	497	77
Ohio	4,933	8,287	59
Oklahoma	1,072	2,458	44
Oregon	773	1,225	63
Pennsylvania	7,736	11,405	68
Rhode Island	500	779	64
South Carolina	591	1,309	45
South Dakota	371	603	61
Tennessee	1,191	3,016	39
Texas	2,823	6,123	46
Utah	327	516	63
Vermont	308	529	58
Virginia	1,388	2,506	55
Washington	1,129	1,807	62
West Virginia	958	1,747	55
Wisconsin	2,090	2,896	72
Wyoming	157	238	66

Special Journals

While in some instances gains have been small, all of the special journals published by the Association have shown increased circulation in 1928. The accompanying table sets out these gains in detail:

	Increase
Archives of Internal Medicine	369
Archives of Otolaryngology	284
Archives of Dermatology and Syphilology	99
Archives of Surgery	12
Archives of Pathology	9
Archives of Neurology and Psychiatry	69
American Journal of Diseases of Children	330

All of the special journals have shown material improvement during the last year. In certain instances this improvement has been especially noteworthy. It is believed that the publications of the Association compare favorably with the very best periodicals in their respective fields and that some of them at least are better than any similar periodicals published.

Notable improvements have been made in some instances in the various departments of these journals, especially in those departments dealing with abstracts, book reviews and proceedings of scientific societies. The high quality of original contributions has been well maintained. The amount of material published in 1928 was considerably larger than in any preceding year, and thus is explained to a large degree the fact that the cost of publication of the special journals was considerably larger in 1928 than ever before.

The net loss incurred through the publication of this group of scientific periodicals was $34,276.85 for the year 1928. Only one of the special journals—the ARCHIVES OF OTOLARYNGOLOGY—produced an income larger than its cost of production.

The Archives of Ophthalmology is a new member of the Association's family of special journals. Beginning with the first number in January, 1929, it will continue and, it is hoped, enlarge the service of the Archives established by Herman Knapp in 1869.

Hygeia

The influence of HYGEIA as the one national health magazine published under scientific auspices continues to increase. It is to be found today in practically every library of importance in the United States. It reaches almost 15,000 school teachers and serves a fundamental purpose in the education of the coming generation in the field of health. Its contents, including articles and illustrations, have been maintained at a high standard and varied so as to cover every field of health interest. The members of the legislative bodies of five states now receive the magazine regularly through activities of medical organizations in those states. A special department established during the year, devoted to the teacher's interests in health, has received general commendation from those it is planned to reach.

The Woman's Auxiliary has done notable service in extending the circulation of HYGEIA. The one cause for lament at present is the apparent lack of individual support by the Fellows of the American Medical Association. Practically every physician subscribes for publications for his office table, and HYGEIA is adapted particularly to such use. Nevertheless, the circulation of HYGEIA directly to physicians includes only some 16,000, instead of the 75,000 who should be regular subscribers.

The periodical is now self-sustaining. By a more united support on the part of the American medical profession, HYGEIA can increase its income both from subscription and from advertising and thus be enabled to spread its information and its influence throughout the nation.

The subscription list of HYGEIA, on Dec. 31, 1928, carried 73,163 names. The monthly average of copies printed was 70,143. Newsstand sales are not large and show little tendency toward any considerable growth. Seventy-three per cent of HYGEIA's subscribers are laymen and 27 per cent are physicians.

The total income in 1928 was $259,629.92, while total expenditures were $251,710.49. Thus the net profit produced by HYGEIA was $7,919.43.

The Quarterly Cumulative Index Medicus

In 1928, the organization established in 1927 to publish the combined *Index Medicus* and QUARTERLY CUMULATIVE INDEX reached an efficient functioning form; hence, it was possible during the year to systematize to a greater extent the classifications, subheadings and other technical features of the index. During the year, references have been included to some 1,400 periodicals, which constitute the important medical publications of the world, the total number of periodicals now published being approximately 1,800. It does not seem advisable to attempt an absolute complete index of all articles included in all the periodicals, since much of the material is ephemeral, and much of it duplication and reprinting. A great deal of medical literature is still devoted to the promotion of proprietary drugs and interests. Even in the last mentioned field, however, the QUARTERLY CUMULATIVE INDEX MEDICUS has covered all preparations that seem to offer promise of permanent value and has aided in their identification by the use of chemical terms in association with trade names. The point is emphasized merely as an indication of the detail required in the development of a project such as the QUARTERLY CUMULATIVE INDEX MEDICUS. The volume has met increasing recognition by medical organizations, research institutes, and periodicals and publishers both here and abroad; indeed, a tentative offer has come from leading German publishers to develop a uniform system of abbreviations of periodicals so that an international form may be used for this purpose.

The Medical Library Association at its annual session devoted a meeting to the consideration of the QUARTERLY CUMULATIVE INDEX MEDICUS, in which recognition was given to its special merits and in which certain criticisms were made. These are now under consideration by the editorial board of the INDEX. The chief criticism has to do with the omission of some of the periodicals heretofore mentioned. A survey is now in process to determine the extent to which such minor publications are being received by American medical libraries.

The force employed in the development of the index now includes approximately fifteen employees in the headquarters office of the American Medical Association, and four employees, whole or part time, in the Army Medical Library in Washington. Some 350 periodicals received regularly in the American Medical Association headquarters are indexed completely by the local staff. The remaining periodicals are indexed as to their important contributions in Washington. In other fields of learning there is no index that attempts even to approximate the handling of this amount of material.

As a recognition of the manner in which this work has met the needs, its subscription list has increased steadily, and many libraries order several copies of the publication to meet local demands. Through a correlation of the indexing service and the other services of the library of the American Medical Association, it is now possible for any physician to keep abreast of the advances in medicine with facility at a reasonable cost. Indeed, it may be stated that the reference work in practically all the medical libraries of the world is based on the use of this fundamental index.

The Carnegie Institution has continued its contribution toward the INDEX, for which grateful acknowledgment is offered by the Board of Trustees. As was predicted in the report made last year, the cost of this publication is far larger than subscription receipts but conceived by the Board of Trustees to be well worth while as a contribution by the Association to the advancement of scientific medicine. The increased subscription price which begins Jan. 1, 1929, will aid to overcome a portion of the deficit unless further improvement is made in the scope and quality of the publication that will necessitate correspondingly greater outlay.

The Library

During 1928 the demands for service by the library have continued to increase. More package libraries have been sent out, more periodicals lent and more reference questions answered.

One thousand one hundred and fifty-one package libraries were supplied in 1928. In the short space of two years an increase of practically 75 per cent has occurred in the demands for this particular service. These figures, together with the many letters of appreciation of the service rendered, justify the financial support given to the package library. An additional assistant was employed during the year to take care of the increased work.

The periodical lending service likewise shows an astonishing growth. Four thousand one hundred and nineteen periodicals were lent in 1928, an increase of 973 over the preceding year. The extraordinary acceleration of interest is best illustrated by the fact that only 475 such journals were lent in 1923—a record of increase of more than 800 per cent in a period of five years. Augmentation of library facilities, particularly the demand for more space, has been a factor in this growth, although the listing of articles in the abstracting departments of THE JOURNAL, in the special journals and in the QUARTERLY CUMULATIVE INDEX MEDICUS must likewise be taken into consideration.

As usual, the library prepared the volume indexes for THE JOURNAL.

Approximately five thousand questions from readers and subscribers have been referred to the library for reply.

The compilation of the QUARTERLY CUMULATIVE INDEX MEDICUS constitutes the major portion of the work carried on by the library. A report of this publication appears elsewhere in this report.

From the employees' library maintained in connection with the Association Medical Library, 4,504 books were borrowed in 1928. Sixty-two new borrower's cards were issued during the year.

The Cooperative Medical Advertising Bureau

The earnings of the Cooperative Medical Advertising Bureau in 1928 were $26,066.28, of which $11,000 was refunded to the state medical journals of the bureau. The gross income for the year was $130,955.95, representing the gross value of advertising secured for those journals identified with the bureau. In the fifteen years of its existence the bureau has produced for these journals considerably more than $1,000,000 in advertising.

The Medical Society of Delaware will hereafter publish its own journal, which will be identified with the bureau. Thus all the journals published by constituent state medical associations, except those in New York and Illinois, are in affiliation in the operation of the Cooperative Medical Advertising Bureau.

Bureau of Health and Public Instruction

RADIO HEALTH TALKS

HYGEIA was one of the first agencies to use the broadcasting route for conveying health information to the public. Through the courtesy of Station KYW, health talks were first given in August, 1923, and continued over that station for five years, at first once a month, and, for the last year and a half once a week. These talks were, for the most part, given by the director and the assistant director of the bureau.

In August, 1928, Station WBBM installed a microphone in the headquarters building of the American Medical Association and arrangements were made for a daily fifteen minute health talk at 10 a. m. A little later it was arranged for a brief health note to be read each evening from the central station of WBBM, followed by an announcement of the health talk on the following morning.

During 1928 there were delivered over Station KYW and its sister station KFKX, thirty-five health talks, and, over Station WBBM, 116 talks, a total of 151. Eighteen of the headquarters personnel have participated in the broadcasting. Several of the talks have been prepared by other members of the Association. The burden of this work has fallen largely on Dr. R. G. Leland, assistant director of the bureau.

In order to encourage the wider distribution of health information by radio and otherwise, twenty-six of the health talks have been mimeographed and are offered to physicians without charge. Although THE JOURNAL has given ample information about this matter, the demand for these talks has not been large, totaling about fifteen complete sets and about fifty single copies.

MEETINGS ATTENDED AND ADDRESSES GIVEN

During the year the following meetings have been attended and addressed by the director or the assistant director of the bureau:

Race Betterment Conference, Battle Creek, Mich., January 2.
Hennepin County Tuberculosis Association, Minneapolis, January 11.
Peoria (Ill.) City Medical Society, February 21. "Who Shall Lead in the Medical and Health Education of the Public?"
Annual meeting of The National Congress of Parents and Teachers, Cleveland, April 28. "The Summer Round-Up of Preschool Children."
Danville (Ill.) Aesculapian Society, May 31. "Preventive Medicine, with Especial Reference to Periodic Health Examinations."
Howard County Medical Society, Kokomo, Ind., April 22.
Annual Conference of State and Provincial Health Authorities, Minneapolis, June 8.
Meeting of South Dakota Medical Association, Hot Springs, S. D., August 7. "What Does the Public Seek in the Way of Health Information?"
Special meeting of representatives of the Joint Committee on Health Problems in Education, New York, September 21.
Nurses of Englewood Hospital, Chicago, November 26. "Periodic Health Examinations."
Nurses of Mercy Hospital, Chicago, December 3. "Periodic Health Examinations."
Blue Island Parent-Teachers Association, Blue Island, Ill.
Logan Square Kiwanis Club, Chicago.
Logan Square Parent-Teachers Association, Chicago.
Nurses of Presbyterian Hospital, Chicago, December 10. "Periodic Health Examinations."
Nurses of Grant Hospital, Chicago, December 13. "Periodic Health Examinations."

HEALTH EXHIBITS

Exhibits of the material of the bureau were presented at the following meetings:

American Medical Association, Minneapolis, in June.
Illinois State Medical Society, Chicago.
Oregon State Medical Society, in September.
Virginia State Medical Society, in October.
National Congress of Parents and Teachers, Cleveland, in April.
American Public Health Association, Chicago, in October.
National Biennial Nursing Convention, Louisville, in June.
Idaho Teachers Association.

Exhibit material is now arranged on suitable display boards and panels so that an exhibit can be sent on request for any state medical society or important local or district society, and on request at the meetings of the more important nonmedical organizations which are interested in health matters.

SALE OF PAMPHLETS AND POSTERS

The sale of pamphlets and posters during the year is covered in the following report from the mail order department:

Cancer pamphlets	2,724
Vision pamphlets	1,555
Research pamphlets	477
Sex education pamphlets	11,818
Score cards	7,000
Anthropometric tables	500
Record sheets	450
Baby welfare pamphlets	10,430
Baby welfare posters	312
Health and education pamphlets	918
Health education program	826
Public health pamphlets	615
Communicable disease pamphlets	2,724
Miscellaneous health pamphlets (Hygeia reprints)	34,646
Health poster booklet	2,250
Health examination blanks	70,000
Health examination manual	1,000
"What's a Health Examination, Anyway?"	125
Total number of units	148,370

New pamphlets have been added to the burean's publications as follows:

1. Cleft Palate, by Horsley.*
2. The Ten Commandments of Good Posture, by Lewin.*
3. Sadie's Shoes, by Graves.*
4. Cancer—An Unsolved Problem, by Warren.*
5. Putting Baby on a Schedule, by Stimson.*
6. Deafness with All Modern Conveniences, by Lloyd.*
7. Cancer—A Treacherous Disease, by Lilienthal.*
8. Astigmatism, by Jackson.
9. What's a Health Examination, Anyway? by Emerson.
10. The Toothbrush—Is It a Menace? by Gardner.*
11. An Appeal to All Citizens, by Lyons.* (Two editions.)
12. Mental Hygiene in Home and School, by Lurie.
13. Underwear and Health, by Clark.*
14. Evolution of Modern Medicine, by Billings.
15. When Your Children Have Measles, Don't Keep Them in the Dark, by Royer.*
16. Fit for the First Day of School, by Brydon and Gardner.
17. The Food We Eat, by Friedenwald.*
18. Broken Minds of Youth, by Burr.*
19. What Science Owes to Animals, by Kolmer.*
20. Your Gallbladder, by Whitaker.*
21. Eye Aches and Eye Fakes, by Gradle.
22. Sunshine Camp in Cambridge, by Day.* (Third edition.)
23. Modern Treatment of Tuberculosis, Gray. (Second edition.)
24. How to Gain Weight, by Miller. (Second edition.)

* Ordered reprinted by author or special agency.

A new set of infant welfare posters has been completed which make a very attractive display. It is proposed to advertise these widely among institutions where they can be used to advantage.

CORRESPONDENCE

Letters sent out on bureau matters numbered 3,831, and replies sent to HYGEIA inquiries, 3,603. Of the questions and answers, a total of 244 were printed in HYGEIA, this being about 6.7 per cent of those answered. Ninety-six of the answers printed were supplied by sixty-six physicians, specialists in the several branches of medicine, and acknowledgment is hereby made to these contributors. The remaining questions were answered direct from the bureau.

INVESTIGATION FOR COMMITTEE ON COST OF MEDICAL CARE

The assistant director of the bureau has been engaged in conducting an investigation with respect to capital investment in medicine and the incomes of physicians. The result of these studies will be made available to the Committee on Cost of Medical care. Questionnaires have been prepared and are being sent to several thousand physicians in order to obtain figures as to the cost of preparation for the conduct of medical practice on the one hand, and the income from medical practice on the other.

PERIODIC HEALTH EXAMINATIONS

The distribution of the blanks for periodic health examinations has been continued.

Occasional requests have been made for a blank to record the results in the physical examination of children. The movement inaugurated four years ago, to secure the physical inspection of every child during the summer preceding his first entrance into school, is educating parents to the importance of the detection and correction of physical defects which may hamper the child in his school work. Every physician should be prepared to make such an examination when called on to do so and should urge that every child be reexamined at suitable intervals.

COOPERATION WITH OTHER ORGANIZATIONS

The Joint Committee on Health Problems in Education has continued its work. In October last, in New York City, the Department of School Health and Physical Education of the National Education Association, to which the joint committee is now related, held an important meeting, which was attended by the director of the bureau, to discuss the future activities of the department and of this committee.

By action of the Board of Trustees, the medical contingent of the joint committee now consists of six members, as follows:

Appointed for one year: Dr. R. G. Leland, Dr. Edward Jackson.
Appointed for two years: Dr. Isaac Abt, Dr. R. W. Corwin.
Appointed for three years: Dr. A. J. Chesley, Dr. J. M. Dodson.

The National Congress of Parents and Teachers held its annual meeting in May, 1928, at Cleveland. This was attended by the director of this bureau, who discussed, at the meetings of four groups, an important activity of the congress—the physical examination of the preschool child. The fact was emphasized that, in seeking the cooperation of physicians in any community in this work, the local parent-teachers association should discuss its plans and make its arrangements always with the local or county medical society. This has been agreed to by the officers of the congress.

This movement to secure the physical examination and the correction of physical defects of all children before entering the schools for the first time is of far-reaching importance, not merely for the welfare of these children but also as an educational procedure. Good results, however, can be secured only by a thorough understanding between the physicians and the parent-teachers groups and intelligent, sympathetic cooperation in this work.

Council on Pharmacy and Chemistry

Twenty-four years ago, when the Council on Pharmacy and Chemistry was first established, the pharmaceutic industry of this country was devoted largely to the promotion of mixtures of drugs offered to the medical profession on the basis of uncritical or inspired testimonials. At that time altogether too many physicians accepted the extravagant "literature" put out for these mixtures without question and permitted the detail man to instruct them in the use of drugs. At that time also the German synthetic drugs were coming into vogue and were being hailed as a welcome delivery from the shotgun mixture, without reflection that the foreign laudatory notices might be altogether as untrustworthy as the home variety of inspired indorsement.

Today, as a result of the untiring and unselfish services of those who compose the Council, the leading representatives of the American pharmaceutic industry have relegated the drug mixture to the background and by the employment of competent scientific staffs are doing excellent work in the development of new and better drugs. An increasingly large proportion of practicing physicians are now well informed with regard to drugs and their value and limitations. The detail man is received with a fuller appreciation of the fact that he is a seller of his firm's wares and not the medical adviser of the physician. The manufacturers of the once widely used German synthetics as well as other European producers are making renewed efforts to become established in this country, but latterly with gratifying appreciation of the high standards which must be met to obtain favorable reception from the American physician.

From year to year appreciation of the Council's work has been increasing, and today this body is recognized as an authority in the matter of drugs and drug therapy alike by the medical profession and by the pharmaceutic industry. The physician is becoming aware to an increasing extent that the Council's facilities for determining the value of drugs are such as the individual practitioner cannot hope to have; and increasing numbers are availing themselves of the Council's advice and opinion in the prescription of new and unofficial drugs. Far-sighted manufacturers of drugs have found it to be good policy to introduce new products only if these present some real merit. Before actually putting a drug on the market, these manufacturers regularly consult the Council and avail themselves of the expert knowledge which this body gives for the asking. They have even become more sympathetic toward the Council's most difficult task—the rational naming of drugs. They recognize that the question of nomenclature is fundamental and that the Council's provisions are eminently fair and necessary.

A number of recent instances illustrate the gratifying prevalence of this attitude among the leading manufacturers and distributers of pharmaceutic products. For example, a drug rather widely used in Germany under a therapeutically suggestive name, which, of course, the Council could not recognize, is being marketed in the United States as Metrazol in consequence of the Council's advice to the American distributer when the preparation was presented for inclusion in New and Nonofficial Remedies. When a preparation called Diaban Flour was presented for consideration, the Council informed the manufacturer that it would be necessary to give the product a properly descriptive name to make it acceptable. The manufacturer agreed to this, and the product was accepted under the name "Wheat-Nut-Casein," which is properly descriptive of its composition. When the Council recently adopted a generic name, amiodoxyl benzoate, for the new drug ammonium orthoiodoxybenzoate, the makers willingly gave up its proprietary name and adopted the Council's designation for the product. At least two firms have promised to market their contemplated preparations of irradiated ergosterol under the name Viosterol, which has been adopted by the Council, though they will, of course, append suitable qualifying terms to fit their particular products. A certain European firm which has adopted the policy of making as many as possible of its products acceptable has recently indicated its willingness to consider the revision of any name which the Council finds unacceptable under its rules governing the recognition of names for drugs. A prominent manufacturer has offered to adopt for its two newly isolated pituitary principles names which the Council can recognize. Certainly these examples show that leading firms appreciate the far-sighted policy of the Council in the matter of drug names. It will no doubt be only a question of time until the naming of newly introduced drugs will cease to be the chaotic welter of arbitrary or therapeutically suggestive terminology which the Council since its inception has tried to reduce to order and rationality.

As the years go on the better sort of manufacturers of pharmaceutic products are improving the character of their scientific departments by employing men of high standing in the scientific world—men who insist that the firm's products measure up to scientific and enlightened standards such as those advocated by the Council. When the application of these ideals involves a loss of money, the commercial side of the firm, of course, raises objections; and all too many manufacturers' catalogues abound in shotgun mixtures which the scientific department of the firm cannot honestly approve but which are continued because the commercial side points out that physicians demand them. The remedy for this is obvious; and it

lies in the hands of the medical profession. If every physician would follow the Council's advice, there would soon be no demand for these unscientific mixtures and their exploitation would consequently cease.

There has recently been a tendency to put out shotgun mixtures bolstered up with a pseudoscientific appeal. This usually involves inclusion among the ingredients of a drug which is new and in which there is a great deal of popular interest. One firm, for example, markets a mixture claimed to be a vitamin preparation and containing a vitamin extract and the once popular nucleic acid, together with the discredited compound elixir of glycerophosphates. Another firm takes advantage of the current interest in liver therapy by "pushing" a preparation claimed to contain a liver extract admixed with glycerophosphates and unspecified "carminatives and digestants," with recommendations for its random use.

THE COUNCIL'S WORK

The routine work of the Council consists in the consideration of new products proposed for inclusion in New and Nonofficial Remedies and the reconsideration of those which have been accepted. A product is accepted if there is adequate evidence in favor of its therapeutic usefulness and if it otherwise conforms to the principles which experience has shown are necessary for governing admission to New and Nonofficial Remedies. These rules or principles are published in the book for the information of all concerned. A product is usually accepted for a period of three years, though in particular cases a shorter period may be specified. At the end of the period the claims made for the product are reexamined and the acceptance is continued if these are satisfactory. If the claims have become unwarranted or if the product is found otherwise in conflict with the Council's rules, the product is omitted from New and Nonofficial Remedies; otherwise the acceptance is continued and the product appears in the next annual edition of the book. With the exception of such continuance of acceptance or rejection all of the Council's actions of acceptance or rejection of products are published in THE JOURNAL and later in New and Nonofficial Remedies or in the annual reprint of the Council Reports. This gives full publicity for the Council's decisions to manufacturers and physicians alike.

During the past year the Council has considered slightly more than the usual quota of products. Of these, by far the greater part have been found acceptable; an appreciable number were found not to come within the scope of New and Nonofficial Remedies; rather more than this were found unacceptable; and the remainder await action, largely to give the manufacturers opportunity to remove objections that have been pointed out by the Council.

NEW EDITION OF NEW AND NONOFFICIAL REMEDIES

Among the products that were accepted for inclusion in the 1929 edition of New and Nonofficial Remedies, now in the press, were the following: Diphtheria Toxoid, which is the toxin of diphtheria so modified by treatment with formaldehyde as greatly to reduce its toxicity yet to preserve its antitoxic power; Metrazol, another proposed substitute for camphor; Iso-Iodeikon, the original brand of phentetiothalein, the Council's name for phenol tetraiodophthalein sodium, proposed for use in the roentgenologic examination of the gallbladder and simultaneous test of liver function; Optochin, which is ethylhydrocupreine, a compound related to quinine and proposed for use in the treatment of lobar pneumonia; Liver Extract No. 343 and Concentrated Liver Extract-Armour, for the treatment of pernicious anemia. Other acceptances are: Bismuth Sodium Tartrate-Searle, another water soluble bismuth tartrate preparation; Scarlet Fever Toxin-P. D. & Co., another scarlet fever toxin manufactured under lease of the Scarlet Fever Commission; Parathyroid Hormone-Squibb, standardized by the method of J. B. Collip, and Paroidin, made and standardized by the method of A. M. Hanson, both being solutions of the active principle or principles of parathyroid gland for appropriate clinical use.

The book has been, as usual, carefully scrutinized and revised to bring it abreast with the current of the best medical thought. The general articles have been brought up to date, and the descriptions of individual drugs have been revised wherever necessary. The book is of such value as a reference text that this new edition should be in the hands of every practicing physician.

ANNUAL REPRINT OF COUNCIL REPORTS

The annual Reprint of the Reports of the Council on Pharmacy and Chemistry is now in the press. This book makes available the action of the Council on all products which have been denied admission to New and Nonofficial Remedies or which have been omitted from the book. It contains in addition any special reports that have been authorized by the Council for publication. Among the reports on products that have been denied admission to New and Nonofficial Remedies are those on Sanarthrit and Telatuten, two preparations of animal tissue, of indefinite composition, proposed for use in arthritis and arteriosclerosis, respectively; on Clauden, a combination of lipoids and undefined proteins proposed for use as a hemostatic; on Hart's Alimentary Elixir of Beef, a liquid medicinal food "fortified" with glycerophosphates; on Alucol, claimed to be colloidal aluminum hydroxide and marketed under this nondescriptive name; on Oxo-Ate and Oxo-Ate B, claimed to be the ammonium and calcium salts, respectively, of orthoiodoxybenzoic acid and marketed under these proprietary, nondescriptive names; on Terpezone, stated to be pinene ozonide and marketed with exaggerated and unwarranted claims; on Vitalipon, an unscientific and indefinite mixture of lipoids claimed to be extracted from "vegetable and animal embryonic organs"; on Eu-Mèd, Aerosan Tablets and Thyangol pastilles, three shotgun mixtures from Germany.

PRELIMINARY AND SPECIAL REPORTS

On its own initiative, or on the request of manufacturers who have new products for which they wish properly safeguarded clinical trial, or at the request of the editor of THE JOURNAL or of section officers of the Scientific Assembly when papers are submitted dealing with products that are to be offered to the profession for clinical use, the Council reports on new products in the experimental stage. In such cases the Council reports on the identity and standardization of the product concerned, and on the pharmacologic and clinical experimental work done, and indicates the conditions under which controlled clinical study may appear desirable. The new volume of Council Reports will contain such reports on Metrazol, which has not been admitted to New and Nonofficial Remedies; on Phenylaminoethanol sulphate, a newly synthesized ephedrine substitute; on Ovarialhormon Folliculin Menformon, the ovarian preparation originated by Dr. Laqueur of Amsterdam; and on Heparmone, a liver preparation.

A valuable extension of the Council's work is to be found in the occasional special reports which it sponsors. These reports aim to advance knowledge by clearing up points concerning drugs and drug therapy. The new volume of Council Reports will contain such a paper dealing with dextrose solutions containing cresol and intended for intravenous administration.

OTHER COUNCIL PUBLICATIONS

Other publications of the Council are: Useful Drugs, which is designed to meet the demand for a less extensive materia medica and to supply a brief discussion of the actions, uses and dosage of a carefully selected list of drugs; and the Epitome of the U. S. Pharmacopeia and National Formulary, which presents an abstract of all the material in those two books of standards and gives besides a brief statement of the actions, uses and dosage with an estimate of the therapeutic usefulness of each drug. A revision of the latest (seventh) edition of Useful Drugs has been prepared and issued during the past year. The Council also publishes annually a volume of reprints of the papers published during the year by those who receive grants from the Therapeutic Research Committee. The current volume is now being made ready for the press.

MEMBERS AND CONSULTANTS OF THE COUNCIL

Selected for their outstanding knowledge in pharmacy, chemistry, pharmacology, physiology and medicine, the members of the Council, all of whôm are busy heads of hospitals, medical colleges or university departments, give their services without remuneration, taking time from their already overcrowded days to work for the cause of rational and scientific medicine. The

hearty thanks and appreciation of the medical profession are due to the Council as a whole and to the members as individuals for the work that has been done and is being carried on. No changes have occurred in the personnel of the Council in the past year, the three members whose terms expired having been elected to succeed themselves. The Council has felt free as occasion from time to time arose to obtain the advice and assistance of men trained in special fields. The response to such requests has always been gratifyingly prompt and full, thus furnishing another example of the unselfishness and devotion of scientists and clinicians to a worthy cause. This year the Council has received valuable advice and assistance from Drs. E. M. Bailey, Conrad Berens, H. N. Cole, George S. Derby, W. J. Dieckmann, E. A. Doisy, Howard Fox, Nicholas Kopeloff, Esmond R. Long, Leland S. McKittrick, Ralph H. Major, O. T. Osborne, William E. Robertson, Harry Steenbock, F. H. Verhoeff, Charles J. White and Alan C. Woods.

THE FUTURE

Thus the Council on Pharmacy and Chemistry looks forward to another year of service with the feeling that definite progress has been made during the past year, not only by way of recognition from the medical profession but also, at this time particularly, from the manufacturers and distributers of pharmaceutic products, who are coming more and more to recognize the value of the Council's work and to modify their products to conform to the Council's principles. This undoubtedly is due to the fact that they are finding it good business to market products that can be advertised in the best medical journals; in other words, products passed by the Council. And they will continue to do this increasingly as the medical profession increasingly learns to support the Council—to realize that they are doing fullest justice to their patients and to themselves by refusing consideration to proprietary medicines that have not been accepted for New and Nonofficial Remedies.

THE THERAPEUTIC RESEARCH COMMITTEE

The Therapeutic Research Committee attempts by spreading its funds over as wide a field as possible to engage the interest of workers in a relatively large number of problems. Individual grants are therefore necessarily small but are placed so as to accomplish the maximum of result. This year $3,000 was appropriated to the committee's use. Of this, $2,400 has been distributed during the year among thirteen new grants as follows:

One at $300	$ 300
Two at $250	500
Four at $200	800
Four at $150	600
Two at $100	200
	$2,400

While in general the committee has restricted its grants to investigations carried out by residents of the United States, it was thought in the case of Bernard E. Read (see grant immediately following list) of the Peking Union Medical College that, since this institution has been so closely identified with this country, an action taken in reference to it need not be considered as a precedent for foreign countries generally.

The following is a detailed list of the grants made during 1928:

Grant 131: J. F. McClendon, professor of physiologic chemistry, University of Minnesota Medical School, and Gel. Burr, University of Minnesota, $300, to investigate certain effects of the female sex hormone, especially on the basal metabolism in human subjects, and food factors in animals.

Grant 132: David Rapport, assistant professor of physiology, Western Reserve University School of Medicine, $200, to investigate the physiologic effect of certain compounds of tyrosine.

Grant 133: W. F. Von Oettingen, senior instructor in pharmacology, Western Reserve University School of Medicine, $100, to investigate the effect of lactones of different chemical constitutions on different organs.

Grant 134: M. L. Tainter, assistant professor of pharmacology, Stanford University School of Medicine, $150, to investigate the pharmacology of ortho and meta phenylenediamines.

Grant 135: John R. Murlin, director and professor of physiology, Department of Vital Economics, University of Rochester School of Medicine and Dentistry, $100, to investigate the conditions under which insulin may be administered effectively by the alimentary tract.

Grant 136: K. K. Chen, associate in pharmacology, Johns Hopkins University School of Medicine, $150, to investigate the Chinese toad venom.

Grant 137: Robert Gesell, professor of physiology, University of Michigan Medical School, $250, to investigate respiratory and circulatory control.

Grant 138: Jean Oliver, professor of pathology, Stanford University Medical School, $200, to investigate experimental nephritis.

Grant 139: John R. Murlin, director and professor of physiology, Department of Vital Economics, University of Rochester School of Medicine and Dentistry, $200, to investigate conditions under which insulin may be administered effectively by the alimentary tract.

Grant 140: F. T. Lord, instructor in medicine, Harvard University Medical School, $250, to investigate the value of the agglutination test as an indication of dosage of Felton's antibody solution and the relation of protective substances in the patient's serum to the outlook.

Grant 141: J. Murray Luck, assistant professor of biochemistry, Stanford University, $150, to investigate the effect of insulin on protein metabolism.

Grant 142: Bernard E. Read of the department of pharmacology, Peking Union Medical School, $200, to investigate ephedra and ephedrine.

Grant 143: Cleveland J. White, M.D., 104 South Michigan Avenue, Chicago, $150, to investigate the local, general and prophylactic aspects of superficial fungous diseases of the skin.

The following is a list of investigations which were conducted under grants from the Therapeutic Research Committee and which were published in 1928:

1. Bernthal, T. G.; Bronk, D. W.; Cordero, Narciso; and Gesell, Robert: The Regulation of Respiration: XVIII. The Effects of Low and High Alveolar Oxygen Pressure and of Sodium Cyanide on the Carotid and Femoral Flow of Blood as Studied with the Continuous Electrometric Method, *Am. J. Physiol.*, January, 1928.

2. Hanzlik, P. J.; DeEds, F.; Empey, L. W., and Farr, W. H.: Hemoclastic Changes in Vitro from Agents Causing Anaphylactoid Reactions, *J. Pharmacol. & Exper. Therap.*, February, 1928.

3. Hunt, Reid; McCann, W. S.; Rowntree, L. G.; Voegtlin, Carl; and Eggleston, Cary: The Status of Intravenous Therapy: IV. Intravenous Use of Dyestuffs as Antiseptics, THE JOURNAL, March 10, 1928.

4. McClendon, J. F.: The Determination of Traces of Iodine: I. *J. Am. Chem. Soc.*, April 5, 1928.

5. Cole, H. N.; Gammel, J. A.; Rauschkolb, J. E.; Schreiber, Nora; and Sollmann, Torald: Clinical Excretion of Mercury: II. After Intramuscular Injections of Mercuric Bromide, After Simple and After Clean Inunction, *Arch. Dermat. & Syph.*, May, 1928.

6. Myers, V. C., and Wardell, Emma L.: The Influence of the Ingestion of the Methyl Xanthines on the Excretion of Uric Acid, *J. Biol. Chem.*, May, 1928.

7. Chen, K. K.: Variations in Blood Pressure on Repeated Administration of *l*- and *dl*-Ephedrines, *J. Pharmacol. & Exper. Therap.*, June, 1928.

8. Schreiber, N. E.; Sollmann, Torald; and Booth, H. S.: The Determination of Traces of Mercury: III. The Quantitative Determination of Mercury in Urine and Feces and the Influence of Medication, *J. Am. Chem. Soc.*, June 5, 1928.

9. Chen, K. K.: A Comparative Study of Synthetic and Natural Ephedrines, *J. Pharmacol. & Exper. Therap.*, June, 1928.

10. Hall, E. M., and Butt, E. M.: Experimental Pigment Cirrhosis Due to Copper Poisoning: Its Relation to Hemochromatosis, *Arch. Path.*, July, 1928.

11. Kiech, V. C., and Luck, J. M.: The Effect of Insulin on Protein Metabolism, *J. Biol. Chem.*, July, 1928.

12. Thayer, Sidney; Jordan, C. N., and Doisy, E. A.: Improved Procedure for the Extraction of the Ovarian Hormone: II. Some Corrections and Additions, *J. Biol. Chem.*, September, 1928.

13. Hunt, Reid; McCann, W. S.; Rowntree, L. G.; Voegtlin, Carl; Eggleston, Cary; and Maczy, K. F.: The Status of Intravenous Therapy: IV. Limitations to the Use of Quinine Intravenously in the Treatment of Malaria, THE JOURNAL, Nov. 3, 1928.

14. Trattner, H. R.: Ureteral Activity in Some Pathologic Conditions Studied by the Graphic Manometric Method, *Arch. Surg.*, December, 1928.

The following grants were issued before Jan. 1, 1928. In some cases the grant has expired and an unexpended balance remains; or the work is not yet completed; or not yet published:

Grant 101: Treat B. Johnson, professor of organic chemistry, Yale University Department of Chemistry, $250, to investigate internal antisepsis.

Grant 102: Charles W. Greene, professor of physiology and pharmacology, University of Missouri Department of Physiology, $250, to investigate the distribution of nitrous oxide and oxygen in the blood during anesthesia.

Grant 110: E. E. Ecker, assistant professor of immunology, Department of Pathology, Western Reserve University School of Medicine, $200, to investigate the action of bacterial filtrates on intestinal movements.

Grant 111: Charles W. Greene, professor of physiology and pharmacology, University of Missouri School of Medicine, $150, to investigate the pharmacology of the rat uterus.

Grant 116: Axel M. Hjort, professor of pharmacology, Dartmouth Medical School, $250, to investigate the various factors influencing the action of the blood raising hormone of the parathyroid.

Grant 119: Nicholas Kopeloff, associate in bacteriology, Psychiatric Institute (New York City), $100, to investigate bacillus acidophilus milk for the prevention and treatment of summer diarrhea in babies.

Grant 121: Cary Eggleston, assistant professor of clinical medicine, Cornell University, $100, to investigate the status of intravenous therapy.

Grant 122: W. F. von Oettingen, instructor of pharmacology, Western Reserve University School of Medicine, $100, to investigate the anthelmintic grouping in santonin.

Grant 125: John R. Murlin, director and professor of physiology, Department of Vital Economics, University of Rochester School of Medi-

cine and Dentistry, $200, to investigate the conditions under which insulin may be administered effectively by the alimentary tract.

Grant 127: W. F. Hamilton, associate professor of physiology, University of Louisville School of Medicine, $125, to investigate circulation time and cardiac output.

Grant 129: W. E. Garrey, professor of physiology, Vanderbilt University School of Medicine, $250, to investigate the value of certain oriental plants in diabetes.

The Chemical Laboratory

The Chemical Laboratory has continued its work of investigating therapeutic products, particularly those offered to the medical profession, of examining certain nostrums sold to the public, and of engaging in many other cooperative duties with various departments of the Association.

THE WORK FOR THE COUNCIL ON PHARMACY AND CHEMISTRY

The work of investigating new remedies sold to physicians has increased from year to year. These products, generally complex in composition, as presented to the Council are often the results of high grade chemical research. It is necessary for the Chemical Laboratory first to familiarize itself with the chemistry dealing with the new compounds before it can attempt to determine the composition and to elaborate standards. For this purpose it has built up a creditable library of its own. The pharmaceutic houses submit chemical data concerning new products, but research workers have not devised sufficient data for adequate standardization. There are also instances in which the manufacturer submits a complete set of standards and identity, which necessitate only confirmation by the chemical laboratory. In this work of evaluation and standardization of new drugs, the laboratory's axiom is that the work must be accurate and thorough in character. While it is a relatively simple matter to determine whether or not a product is of the general chemical character claimed for it, it is not a simple matter to prove or disprove that it is not of the suggested chemical structure, or that it has needless impurities or is a mixture and not a compound. Since both the Council on Pharmacy and Chemistry and the medical profession are leaning more heavily each year on the laboratory for advice and guidance in these matters, as they affect remedies used for the treatment of the sick, it follows that the examinations must be executed rigorously.

There has been no let-up in this policy. In this connection it is gratifying to note the increasing cooperation on the part of manufacturers in aiding the laboratory in the establishment of high and satisfactory standards. It is equally gratifying to note how the "A. M. A." standards are reproduced elsewhere and how many independent investigators make use of them in examining either the parent substances or similar products.

During the past year the laboratory has standardized a number of new substances for the Council, among them the iodized oils used in roentgenologic work. As a result of its investigation on certain alkaloids isolated from squills, one producer repeated its work and now has submitted, instead of one product, two which are the result of intensive investigation. The examination by the laboratory of these recent products has not been completed. The laboratory has also investigated very carefully Cardiazol (pentamethylenetetrazol) and has developed sufficient evidence to recommend acceptance of the formula by the Council.

The chemistry of Salyrgan, a new and complex mercury preparation, was finally satisfactorily determined and rigorous standards were drawn up, the manufacturer having given full cooperation.

Probably there has been no product in the twenty-one years' experience of the chemical laboratory which has been watched over as carefully as ephedrine and its salts. Every dosage form of ephedrine or ephedrine salt described in New and Nonofficial Remedies has been standardized by the A. M. A. Chemical Laboratory. This precaution is taken because ephedrine is susceptible to unusual reactions. The exercise of vigorous control seems to be well warranted, as six different dosage forms were rejected during the year.

At the request of the Council, the laboratory investigated phenyl-amino-ethanol sulphate, a synthetic preparation similar in some respects to ephedrine, which was the subject of a report offered for publication in THE JOURNAL. As is customary, THE JOURNAL asked the Council for a statement of composition before the paper appeared in THE JOURNAL. This product was made the subject of an original investigation, and the report for THE JOURNAL was released accordingly.

The laboratory continued the collaboration with Prof. W. R. Smith of Lewis Institute for controlling ethylene for anesthesia. Besides the specimens mentioned in last year's report, two different investigations of suspected samples have been made. In no case were the products found to be of inferior quality. It has also collaborated with Dr. A. J. Walcott of Northwestern University, who has determined the crystalline and optical properties of new substances.

WORK FOR THE BUREAU OF INVESTIGATION

A number of nostrums have been analyzed for the Bureau of Investigation, the reports of which have appeared from time to time in THE JOURNAL.

INDEPENDENT INVESTIGATIONS

The laboratory is so overwhelmed with requests for examination of various products, both from the Council and from the Bureau of Investigation, that the amount of independent investigation has been somewhat limited during the past year. However, each of the chemists on the laboratory staff has published an original article in scientific literature. The report of the work on ephedrine and its salts by Dr. Peterson appeared in *Industrial and Engineering Chemistry*, April, 1928, p. 388. The investigation of the composition of Borocaine and also the work on Salyrgan by Dr. Collins were published in THE JOURNAL, Jan. 7, 1928, p. 25, and Dec. 22, 1928, p. 1994, respectively. Alin Sulphate was the subject of a report which appeared in the *Journal of the American Pharmaceutical Association* for December, 1928.

A painstaking investigation was also made of certain so-called decaffeinated coffees. This investigation occupied a considerable amount of time because one manufacturer challenged the observations of the laboratory. As a result, a collaborative piece of work was done between a commercial laboratory of high repute and the A. M. A. Chemical Laboratory. The results of this meticulous examination and study of various methods of determining caffeine in decaffeinated coffees were published in THE JOURNAL, Sept. 22, 1928, p. 880. As a result of the laboratory's work on so-called decaffeinated coffees, it is possible to have a much clearer attitude toward the proper place for these substances in the dietary. It also was a means of focusing attention on the fact that the statement concerning the removal of a specified amount of caffeine means little if the amount originally present is not known; also an important consideration is an appreciation of the total amount of caffeine in a cup of the finished beverage. Furthermore, the investigation has undoubtedly been of service to the manufacturers in aiding them in checking up on the market supply of so-called decaffeinated coffees. Two of the firms are now keeping their respective products under rigorous control; this was not done previously.

COOPERATION WITH THE AMERICAN DENTAL ASSOCIATION

On March 1, 1928, the chemist of the American Dental Association entered on his duties in the chemical laboratory of the American Medical Association, giving the first six months to our problems as a training period. The agreement extends over two years, so that this chemist is still engaged in examining dental proprietaries in this laboratory. Beginning with the September, 1928, issue of the *Journal of the American Dental Association*, there has appeared each month an article dealing with the investigation of dental products. The articles to date have been critical in nature because the dental association is in the process of forming a council similar to the Council on Pharmacy and Chemistry. Until this council is formed, the work done by the A. D. A. chemist in this laboratory will deal with the nostrums of the dental field. We are informed that it is the expectation of the dental association that he will also do purely constructive work, such as investigating worth-while drugs and standardizing them for the dental profession, as has been done for the medical profession, as soon as the dental council is organized. Abstracts have appeared in THE JOURNAL, after the articles have been published in the *Journal of the American Dental Association*.

MISCELLANEOUS

Correspondence has increased considerably, as members and Fellows of the Association make use of the extensive files of the Council on Pharmacy and Chemistry and of the chemical laboratory. Much time has been devoted in furthering the excellent work of the library staff in the editing of the QUARTERLY CUMULATIVE INDEX MEDICUS, particularly in aiding in the classification of various compounds under common chemical designations and supplying information concerning active ingredients in proprietary preparations for proper classification. The laboratory has also continued service to THE JOURNAL and to HYGEIA.

Council on Physical Therapy

The Council on Physical Therapy has made substantial progress in its task of placing physical therapy on a sound basis as evidenced by the increasingly conservative and scientific attitude of manufacturers and by the developed interest of competent, conservative physicians in the therapeutic use of physical energies. The Council attempts to supply to the medical profession unbiased information in the field of physical therapy and biophysics, fosters investigation of fundamental problems and examines and reports on apparatus. Information is supplied through the columns of THE JOURNAL, through correspondence, by radio talks and by papers presented before medical and other scientific societies.

THE MEMBERS OF THE COUNCIL

The Council on Physical Therapy comprises physicists, physiologists, pathologists and clinicians, which makes possible a thorough consideration of all phases of physical therapy and biophysics.

During the year 1928 the Council lost two valuable members through the death of Dr. F. B. Granger and the resignation of Prof. Arthur H. Compton, both of whom were original members of the Council.

Dr. Granger, through his official teaching positions, his writings and his contact with audiences throughout the country, exerted an important influence toward a sound and wider development of the field of physical therapy. His death has taken from the Council a member whose interest and activities were of great value in its formation and work.

Prof. Arthur H. Compton found it necessary to curtail his work and resigned as a member of the Council in February, 1928.

Dr. W. W. Coblentz, radiation physicist of the Bureau of Standards, was elected by the Board of Trustees to succeed Professor Compton.

SPECIAL ARTICLES

The sane medical use of physical agents has been furthered by the publication of special articles on the various branches of physical therapy, in which the purpose has been to give all that is definitely known concerning the therapeutic merits and limitations of these agents. This series includes articles on the medical use of roentgen, ultraviolet and heat rays, therapeutic exercise, hydrotherapy, and on electrical currents of various frequencies and of various wave forms. These special articles are written by members of the Council and by others who have achieved prominence in the fields with which the articles deal. Members of the Council, specialists in the subjects to be treated, also act as editors of the articles. Before publication, however, the articles must be acceptable to the entire council.

A number of these articles have already been published, and the remainder will soon be published in THE JOURNAL. They will then be collected, edited carefully, and published in the form of a handbook. The following articles of this series have already been published:

The Influence and Therapeutic Use of External Heat: Physiology and Use in Internal Medicine, Ralph Pemberton, M.D. Use in Nervous Diseases, Theodore H. Weisenburg, M.D. Use in Surgical and Orthopedic Conditions, A. Bruce Gill, M.D. Use in Dermatology, Jay F. Schamberg, M.D., THE JOURNAL, Oct. 8, 1927, p. 1243.

Cutaneous Roentgen-Ray and Radium Therapy, George M. MacKee, M.D., THE JOURNAL, Jan. 7, 1928, p. 28.

Roentgen-Ray Diagnosis: Part I, Leopold Jaches, M.D., THE JOURNAL, Feb. 18, 1928, p. 541.

Roentgen-Ray Diagnosis: Part II, Leopold Jaches, M.D., THE JOURNAL, Feb. 25, 1928, p. 612.

Occupational Therapy, Harry E. Mock, M.D., and Mary Abbey, THE JOURNAL, Sept. 15, 1928, p. 797.

EDUCATIONAL ACTIVITIES

The scientific use of mechanical, radiant and electrical energy in the diagnosis and treatment of disease is comparatively new. There is in physical therapy much that must be eliminated before sound progress can be made. For that reason a large part of the Council's activities must necessarily be educational. The Council has endeavored to promote sound physical therapy and to explode unscientific and pernicious theories as to the biologic effect and therapeutic merit of physical energies. A steadily increasing correspondence bears witness to the fact that the physicians of the country are looking to the Council for guidance. It is believed that the impartial information disseminated among the profession will have influence in promoting conservative and proper use of physical therapy.

During the last year a number of fifteen minute papers were broadcast over station WBBM, Chicago. By explaining the characteristics of radiant, magnetic and electrical energy in its various forms, and the known effects of these energies on plants and on animals, effective warfare has been waged against unscrupulous, mercenary manufacturers, mail order houses, and department stores that seek to sell to the public incandescent lamps as sources of ultraviolet and coils of bell wire as cures for every ill known to man. The following radio talks were given during the year 1928:

Origin and Purpose of the Council on Physical Therapy.
The New Worship of the Sun.
Light—What Is It?
Physical Fakes.
Light—Its Dangers.
Humidity in Your Home.
X-Rays in Medicine.

EXHIBIT

The exhibit of the Council at the annual session held in Minneapolis proved effective in arousing interest in the rational use of physical therapy and in encouraging further study. The entire exhibit was planned with the definite object in view of teaching one thing. By means of charts and posters the Council endeavored to bring home to the profession the fact that physical therapy is not a separate and distinct therapy but a useful adjuvant to proper medical and surgical care.

RESEARCH

The reports of the Council have not only imparted needed information but also stimulated scientific workers to investigate biophysical phenomena. A number of those who wished to do research work in this field have already conferred with the Council in regard to certain phases of the work they propose to do. From available information, the Council was able to make suggestions which may be of great assistance. To encourage and to assist such investigation to a greater extent, the Council felt that it should be in a position to offer monetary grants. Therefore, on the approval of the Board of Trustees, a Committee on Scientific Research was appointed to distribute an appropriation made for this purpose. The members of this committee are Dr. W. E. Garrey, professor of physiology, Vanderbilt University, chairman; Dr. H. B. Williams, professor of physiology, Columbia University; Dr. W. T. Bovie, professor of biophysics, Northwestern University Medical School; and the secretary of the Council. Grants will be given by this committee to those who are working on fundamental problems and who in the opinion of this committee need financial assistance in order to carry their investigations to successful conclusion. Investigators who require special apparatus may apply to the Committee on Scientific Research.

These investigations should be carried out through the close cooperation of physicists, biologists and clinicians. The sources used should be carefully calibrated and the effect of the physical energy delivered by such sources be determined not only on normal but also on diseased animals.

In 1928 this committee has made one grant for approximately $700 for apparatus to be lent to a committee at Harvard University for use in an investigation of the comparative therapeutic value of filtered and unfiltered light from the quartz mercury vapor arc lamp and from the carbon arc lamp equipped with

impregnated and unimpregnated carbon electrodes. The Harvard Committee supervising this investigation comprises Theodore Lyman, Ph.D., director, Jefferson Physical Laboratory, chairman; William J. Crozier, Ph.D., professor of general physiology; E. M. Chaffee, Ph.D., professor of physics; F. H. Crawford, B.S., A.B., instructor in physics and Bayard Cutting Fellow for research in physics; and Mr. F. C. Doble, president of the Doble Engineering Company of Boston. As tentatively outlined, this investigation comprises biologic and clinical tests to determine the relative biologic effect of:

1. Sunlight:
   (*a*) Direct.
   (*b*) Filtered through window glass.
2. Light from quartz mercury vapor arc:
   (*a*) Unfiltered.
   (*b*) Filtered through a filter that cuts off rays shorter than 2,900 angstrom units.
3. Carbon arc:
   (*a*) Equipped with standard commercial carbon electrodes.
   (*b*) Equipped with cored therapeutic carbon electrodes.

From time to time reports of accidents due to explosions of ether and ethylene while used as anesthetics have come to the attention of the Council. Dr. H. B. Williams of the Council is investigating the causes and has obtained important information concerning prevention of such explosions. This investigation is now nearing completion and a report will be prepared by the Council, containing recommendations regarding the design and construction of apparatus.

OFFICIAL RULES

For inclusion in the list of accepted devices for physical therapy, a device and the advertising and descriptive matter pertaining to it must conform to rules adopted by the Council. These rules provide that a description of construction and operation must be submitted, satisfactory evidence of effectiveness must be made available, and the therapeutic claims for a device must be in harmony with the evidence available to the Council. Although a device itself may be acceptable, such device will not be accepted if the policies of the manufacturer are clearly detrimental to the welfare of the public.

REPORTS ON APPARATUS

Reports, both favorable and unfavorable, on apparatus submitted to the Council appear in THE JOURNAL devoted to the activities of this council. In these reports complete information is given in regard to the construction and operating characteristics of the devices. Accurate information on the type and characteristics of the electrical or radiant energy generated by these machines is presented for the benefit of the profession. A physician who uses a carefully calibrated machine, as those accepted by the Council must be, will be in a position to administer physical therapy with reasonable accuracy. He will also know more about results.

Reports on apparatus rejected are also published in THE JOURNAL. Before publication, time is given the manufacturer to redesign his apparatus or to modify the claims made for it so as to conform to the rules of the Council.

NOMENCLATURE

A scientific nomenclature promotes uniformity and exerts a powerful influence in behalf of sound progress. Probably the most important work thus far done by the Council is its preparation of a list of definitions of terms. The first part of this list was published in THE JOURNAL, Dec. 8, 1928, after having been submitted for criticism to prominent physicians, physicists, physiologists, chemists and engineers. The report has been well received.

HOSPITAL DEPARTMENTS OF PHYSICAL THERAPY

The Council on Medical Education and Hospitals included in its hospital questionnaire a request for information pertaining to departments of physical therapy. Of the 6,807 registered hospitals, 2,091 reported physical therapy departments. Further work for the establishment of physical therapy departments in hospitals will be undertaken. The Council will then publish a report embodying suggestions as to what the minimum equipment should be to function effectively as a place where adjuvant treatment to proper medical and surgical care may be given. It is now generally accepted that proper postoperative physical therapy treatment in certain conditions may materially decrease the period of hospitalization. Therefore, such hospital departments under the direction of competent physicians would probably make possible the treatment of a greater number of patients annually.

The Bureau of Investigation

As has been repeatedly stated in previous reports, the best index of the activities of the Bureau of Investigation is the annual amount of correspondence. Answering the inquiries that come in from physicians and laymen is, by far, the most important work that the bureau does. It is to be emphasized also that the work in this field does not have the casualness of ordinary business correspondence but carries with it a serious responsibility. Dealing, as the bureau's letters do, with the pernicious and frequently fraudulent activities of nostrum exploiters, quacks and charlatans, the utmost care has been exercised to see that no statements are made that are not justified by the facts and supported by documentary evidence. It is a matter for considerable satisfaction on the part of the Association that, of the more than eighty-five thousand letters that have gone out during the past eighteen years from the department now known as the Bureau of Investigation, not one has been the subject of a suit for libel or damages.

As indicative of the interest shown both by physicians and by laymen in this feature of service given by the American Medical Association, the following tabulation, covering an eleven-year period, will prove of interest. The table shows the number of inquiries received (and answered) from (*a*) physicians and (*b*) the public by the Bureau of Investigation in the period 1918 to 1928, inclusive:

Inquiries Received and Answered by Bureau of Investigation

	Inquiries from Physicians	Inquiries from Laymen	Total Inquiries
1918	969	858	1,827
1919	1,422	1,088	2,510
1920	1,875	1,007	2,882
1921	2,105	1,442	3,547
1922	2,646	1,970	4,616
1923	3,545	2,525	6,070
1924	3,054	2,831	5,885
1925	3,541	2,866	6,407
1926	4,112	3,645	7,757
1927	3,829	5,022	8,851
1928	4,237	5,743	9,980

In studying this table, it will be noticed that the number of inquiries received from physicians in 1924 and in 1927, respectively, were fewer than those received in the years immediately preceding these dates. The reason for this is that in those two years many inquiries that had previously been handled by the Bureau of Investigation were turned over to other departments. For example: Letters regarding chiropractors, osteopaths and the like are no longer answered by the Bureau of Investigation but are handled by the Council on Medical Education and Hospitals. So, too, inquiries on various miscellaneous subjects that never fell strictly within the field of the Bureau of Investigation—that is, did not directly deal with the nostrum evil, quackery or pseudomedicine—are now answered by the Bureau of Health and Public Instruction. Nevertheless, in spite of this readjustment, the number of inquiries received from physicians and answered by the Bureau of Investigation in 1928 is between four and five times as great as the number received from the same group in 1918.

The inquiries from the general public have consistently increased and especially, it is to be noticed, has there been a marked increase in these inquiries during the years 1927 and 1928. There are two reasons: HYGEIA is becoming more and more popular and, through it, the public is learning of the service that the American Medical Association offers in this field. During the past two years, the Association has been using the radio to acquaint the public with the achievements of scientific medicine and the work of the Association.

There has been an especially large increase in the number of inquiries received by the bureau during 1928 from the various Better Business Bureaus, national and local, as well as from newspaper and magazine managers and editors. The reason is not hard to see. Many newspapers that, during the lush advertising years, were fairly critical in their acceptance of medical copy have lowered their standards and are today much more concerned with linage than with quality. Thus, the work of the Better Business Bureaus and also of conscientious advertising managers has been made more difficult because of the amount of low-grade medical advertising that is being offered to the newspapers and magazines.

That work of the bureau best known to the medical profession—the weekly articles that appear in THE JOURNAL—has been kept up to its usual standard. Commencing with the first issue of THE JOURNAL for 1928, the old departmental heading "Propaganda for Reform" was changed to "Bureau of Investigation." With that change, the reports of the Council on Pharmacy and Chemistry and the reports by the A. M. A. Chemical Laboratory ceased to appear under that department. This means a separation of the critical articles of the Council on Pharmacy and Chemistry dealing with proprietary remedies that are sold, nominally at least, for prescription purposes, and the critical articles of the Bureau of Investigation, dealing with the cruder proprietary medicinals sold for self-medication to the public—the so-called patent medicines. This change in departmental headings has done much to clarify in the minds of the profession the respective functions of the Bureau of Investigation and the Council on Pharmacy and Chemistry. The idea had become rather firmly fixed in the minds of many physicians that the Council on Pharmacy and Chemistry investigated and prepared articles on nostrums and quackery and allied subjects. Such is not the case and never has been.

During 1928 the Bureau of Investigation prepared and published in THE JOURNAL thirty-seven articles covering forty-five JOURNAL pages. Seventeen of these articles dealt with "patent medicines," three with quack schemes that have been declared fraudulent and debarred from the mails, ten with quacks, three with schemes having a medical angle, and four with mechanical nostrums. The seventeen articles on "patent medicines" covered sixty-four products falling within the following groups:

Cure-alls	16	Contraceptives	2
Aphrodisiacs	9	Rheumatism cures	1
Syphilis cures	6	Obesity cures	1
Female weakness cures	4	Asthma cures	1
Gonorrhea cures	3	Purgatives	1
Alcoholic tonics	3	Abortifacients	1
Consumption cures	3	Pyorrhea remedies	1
Mouth washes	3	Diarrhea cures	1
Epilepsy cures	2	Bunion cures	1
Mineral waters	2	Stomach remedies	1
Baldness cures	2		

The director of the bureau, as during previous years, has delivered on invitation many addresses on various phases of quackery. Only such engagements were accepted as could be filled without impairing the efficiency of the bureau. The following talks were given:

Chicago (Jan. 9, 1928).—Illustrated talk, "Mrs. Gullible's Travels in Cosmetic Land," given before the Ravenswood Woman's Club.

Chicago (Jan. 10, 1928).—Illustrated talk, "The Nostrum and the Public Health," given at a noon luncheon of the Kiwanis Club of Englewood.

Chicago (Jan. 20, 1928).—Illustrated talk, "Mrs. Gullible's Travels in Cosmetic Land," given before the Biological Branch of the Chicago Section of the American Chemical Society (ladies' night).

Chicago (Feb. 16, 1928).—Illustrated talk, "Patent Medicines and Cosmetics," given before the congregational membership and invited guests of the Ogden Park Methodist Episcopal Church.

Chicago (Feb. 27, 1928).—Illustrated talk, "Mrs. Gullible's Travels in Cosmetic Land," given before the Hyde Park Travel Club.

Chicago (March 13, 1928).—Illustrated talk, "Mrs. Gullible's Travels in Cosmetic Land," given before the Roseland Woman's Club.

Chicago (March 24, 1928).—Illustrated talk, "Quacks and Cures," given before the Jugoslav Educational Society.

Chicago (March 28, 1928).—Illustrated talk, "Pink Pills for Pale People," given before the membership of the Emerald Avenue Presbyterian Church.

Chicago (April 10, 1928).—Illustrated talk, "Patent Medicines and the Public," given before the Kymry Society (Welsh Club).

Maywood, Ill. (April 23, 1928).—Illustrated talk, "Fake Consumption Cures," given before the committee members of the public welfare organizations in Cook County, under the auspices of the Chicago Tuberculosis Institute.

Chicago (May 2, 1928).—Illustrated talk, "The Nostrum and the Public Health," given before the students of the Union Theological College.

Blue Island, Ill. (May 21, 1928).—Illustrated talk on "Patent Medicines and the Public Health," given before the committee members of the public welfare organization.

Portland, Ore. (June 19, 1928).—Illustrated paper, "Consumption Cure Quackery," given before the Clinical Section of the National Tuberculosis Association.

Park Ridge, Ill. (July 11, 1928).—Illustrated talk, "Patent Medicines and the Public Health," given before the Park Ridge Kiwanis Club.

Biloxi, Miss. (Sept. 13, 1928).—Illustrated paper, "Consumption Cure Quackery," given before the Southern Tuberculosis Conference.

New Haven, Conn. (Sept. 19, 1928).—Illustrated talk, "The Patent Medicine and the Public Health," given before the Clinical Congress of the Connecticut State Medical Society.

Detroit, Mich. (Sept. 25, 1928).—Radio talk over WGHP on "Medical Charlatans"; also illustrated talk, "The Nostrum and the Public Health," before the Wayne County Medical Society.

Chicago (Oct. 19, 1928).—Illustrated paper, "Quackery in Gynecology," given before the Chicago Gynecological Society.

Chicago (Oct. 30, 1928).—Illustrated talk, "The Newer Quackery," given before the South Chicago Branch of the Chicago Medical Society.

Chicago (Dec. 14, 1928).—Illustrated talk, "The Patent Medicine and the Public Health," given before the South Side Branch of the Chicago Medical Society.

In addition to the papers and informal talks just listed, the director has also broadcast from the A. M. A. headquarters over WBBM the following fifteen-minute talks:

"The Origin and Function of the Bureau of Investigation."
"Dangerous Freckle Creams, Hair Removers, etc."
"Dangerous Hair Dyes, Hair Lotions, etc."
"Medical Charlatans."
"Medical Mail-Order Frauds."
"Fooling the Fat— I" (Obesity Cure Fakes).
"Fooling the Fat—II" (Obesity Cure Fakes).
"The Quack vs. the Pure Food Law."
"Patent Medicine Testimonials."

The lantern slide loan service of the Bureau of Investigation has been in even greater demand this year than ever before, and physicians and health officials who have wished to illustrate talks on "patent medicines" or quacks have taken advantage of this service. Of the group pamphlets prepared and issued by the bureau, three have been revised and reprinted during 1928—"Female Weakness Cures," "Mineral Waters" and "Patent Medicine."

There is still a good demand for the educational posters on quackery and "patent medicines" prepared by the bureau.

The suit of the "Hoxide Institute" vs. the American Medical Association et al., claiming $250,000 damages, came on for trial in Taylorville, Ill., Dec. 4, 1928. Although the article exposing these "cancer cure" quacks, on which the case was based, was published Jan. 2, 1926, two years ago, the Hoxide concern was still not prepared to proceed with the trial of the case. The court entered an order dismissing the suit.

Bureau of Legal Medicine and Legislation

FEDERAL INCOME TAXES

Deduction of Traveling Expenses.—When the last report of the Bureau of Legal Medicine and Legislation was submitted, the Revenue Act of 1928 was pending before the Senate Committee on Finance. It had been passed by the House of Representatives without provision to insure the right of physicians to deduct traveling expenses incurred in attending meetings of medical organizations. An amendment to the bill to insure that result had been drafted by the bureau and introduced in the Senate by Senator Robinson of Indiana. Through Senator Robinson's courtesy the Committee on Finance granted to the director of the bureau an opportunity to present the arguments of the Association in support of the amendment. The committee, however, rejected the amendment. When the bill was under consideration on the floor of the Senate, Senator Robinson was absent, and Senator Copeland acted on behalf of the medical profession, dentists, and others supporting the amendment. The Senate adopted it by a vote of 59 to 13. Unfortunately, however, when the bill went to conference, the amendment insuring the deductibility of physicians' traveling

expenses was one of the amendments on which the Senate conferees yielded. The report of the conference committee being privileged and not debatable, it was impossible for the friends of the amendment in the Senate and in the House of Representatives to do anything to procure relief, without sending the entire bill back to conference, which obviously was a task not likely to be accomplished on the basis of the issue raised by the amendment. The Revenue Bill of 1928 was enacted, therefore, without providing relief for the medical profession with respect to the deductibility of traveling expenses.

On Oct. 2, 1928, however, the Board of Tax Appeals, in the appeal of Cecil M. Jack, 13 Board of Tax Appeals 726, decided that the Commissioner of Internal Revenue had erred in denying the deductibility of physicians' traveling expenses incurred in attending meetings of medical organizations. Dr. Jack had contested the issue with the commissioner, before the Board of Tax Appeals, along with certain other issues that he was contesting, and on this issue he won. Later the same issue was presented to the Board of Tax Appeals in the appeal of J. Bentley Squier, 13 Board of Tax Appeals 1223, in connection with certain other contested issues, and the board reaffirmed its previous ruling. The Commissioner of Internal Revenue is allowed by law six months after the promulgation of such board rulings to determine whether he will acquiesce in them or contest them in the courts. Unless he pronounces his determination to appeal to the courts for a decision, within the period stated, the decision of the board becomes final and binding on the commissioner. At the close of the period covered by this report, the commissioner had not announced his decision with respect to either of these cases.

Earned Income of Physicians.—During the year several cases have arisen involving the determination of the earned incomes of physicians who operate clinics and employ professional assistants. Federal revenue agents have contended in these cases that when the proprietors of a clinic employ professional assistants they pay such assistants less in the way of salaries, fees and commissions than the proprietors receive for such assistants' services, from the patients whom the assistants treat or assist in treating. It was contended that the difference between the salaries, fees and commissions paid to a professional assistant and the amounts charged patients for the services of that assistant was not "earned income" but was "profit," and that the tax on the amount so received was not subject to the 25 per cent deduction allowed by law on the tax that would accrue from earned income. The situation came acutely to an issue in the case of the Arnett-Crockett clinic at La Fayette, Ind. Drs. Arnett and Crockett employed counsel to act for them, and the Board of Trustees authorized the employment of counsel to represent the interests of the profession at large. Notice was served on the Commissioner of Internal Revenue of appeals to the Board of Tax Appeals and to the court. These cases were pending at the close of the year.

MEDICINAL LIQUOR

Several bills relating to medicinal liquor were introduced in Congress during the year. The most drastic of these bills (H. R. 11410, A Bill To Amend the Act of October 28, 1919, known as the National Prohibition Act [Forty-First Statutes at Large, chapter 85], as amended and supplemented, for the purpose of enforcing the eighteenth amendment to the constitution more efficiently, and preventing evasions thereof), was designed to prevent the use of liquor for medicinal purposes. The Committee on the Judiciary in the House of Representatives gave a hearing on this bill, at which the Bureau of Legal Medicine and Legislation was represented. Only one session of the committee was held, and that was fully occupied by the proponents of the bill in their attempts to justify the enactment of the measure. They did not succeed in the time allowed in presenting their entire case, but no hearings have been held since that time. The bill was pending at the close of the year in the committee to which it was referred, with no prospect of its enactment.

A new form for use in the prescribing of medicinal liquor was adopted by the Commissioner of Prohibition during the year. When the matter of substituting the new form for the old one was discussed, it was represented on behalf of the commissioner that the adoption of the form would render it unnecessary for the physician to keep a book record of the medicinal liquor prescribed by him, and on the basis of that representation tentative approval was given to the form. Before the form was officially adopted, however, the commissioner apparently discovered that his representatives had been in error with respect to the feasibility of doing away, through the adoption of the new prescription form, with the record-keeping required by law. The net result, therefore, was the imposition on the profession of additional labor and expense in connection with the use of official prescription blanks, without any corresponding relief in any direction. The added cost to the profession of the adoption of the new form has been estimated at $250,000 a year.

NARCOTICS

The regulations promulgated by the Commissioner of Prohibition under the Harrison Narcotic Law, as amended, that became effective Jan. 1, 1928, have apparently not given rise to any unusual trouble. A rather remarkable situation has arisen with respect to these situations, however, through the issue of confidential instructions by the chief of the narcotic division of the Bureau of Prohibition to narcotic field agents relative to record-keeping by physicians. The director of the Bureau of Legal Medicine and Legislation has reason to believe that these instructions were contrary to the provisions of the Harrison Narcotic Law as amended and of the regulations issued under authority of that act and undertook to obtain a copy of them. The chief of the narcotic division refused, however, to furnish a copy of such instructions and in this he was sustained by Assistant Secretary of the Treasury Lowman, on an appeal made directly by the General Manager to the Secretary of the Treasury.

The Council on Pharmacy and Chemistry has recommended amendments to the several federal narcotic acts to permit the importation of narcotic drugs of some of the rarer types for scientific use, and to remove the annoying restrictions of the laws from some of the derivatives of opium and coca leaves that seem to have no habit-forming properties. In determining whether such amendments shall or shall not have the approval of the Board of Trustees and of the House of Delegates, serious consideration will have to be given, not only to the possible habit-forming properties of those derivatives of opium and coca leaves that are covered by the amendment, but also to the possibility of reconverting such substances on a commercial basis into other substances known to give rise to addiction. Even though the cost of such reconversion might be considerable, yet in view of the high prices that narcotic addicts are willing to pay for their drugs of addiction, reconversion processes might be feasible in the underworld that would not be feasible in legitimate commerce.

The committee on a uniform state narcotic law of the Conference of Commissioners on Uniform State Laws prepared the draft of such a law for presentation at the meeting of the conference in Seattle, July 17-23, 1928. The director of the bureau was invited to meet with the committee and with the conference in Seattle. A careful study of the draft raised questions as to the constitutionality of certain features of it and indicated grave difficulties in enforcing it in any event. As a result of a careful study of the draft by the committee and by the director, the conference recommitted the matter to the committee, for report next year. The committee requested the director of the bureau to cooperate with one of its members, Prof. Ernest Freund of the Law School of the University of Chicago, in preparing a bill for submission in 1929.

In view of the crowded condition of the federal penitentiaries and of the number of narcotic addicts confined in them, a bill (H. R. 13645, A Bill To establish two United States narcotic farms for the confinement and treatment of persons addicted to the use of habit-forming narcotic drugs who have been convicted of offenses against the United States, and for other purposes) was introduced in Congress to provide for the establishment and maintenance of two so-called narcotic farms. These farms are intended primarily to afford places to which prisoners who are addicted to disease of narcotics can be committed in the hope of curing them of their addiction and of rehabilitating them. A transfer of these narcotic addicts from

the prisons will as a secondary result reduce the crowding of the penitentiaries. Incidentally, the bill provides for the admission to such narcotic farms of any addict that makes application for admission and whose admission the Secretary of the Treasury will approve.

THE SHEPPARD-TOWNER MATERNITY ACT

On Jan. 22, 1927, an act was passed specifically repealing the Sheppard-Towner Maternity and Infancy Act, to take effect, June 30, 1929. The form of the act passed was the result of a compromise between the proponents and the opponents of the act named. It was understood that the proponents of the act, in order to have the legislation passed in a form that would extend the life of that act for two years instead of repealing it at the end of the five-year period fixed by the original act, agreed that they would make no effort later to procure legislation extending it further. Literally, it may be said that they have made no such effort; they have made no apparent effort to revivify the Sheppard-Towner Act. There has, however, been introduced into the House of Representatives a bill that is in substance the Sheppard-Towner Act over again, with the safeguards that surrounded the Sheppard-Towner Act removed. The bill,[1] sometimes referred to as the Newton bill, in substance authorizes permanently the appropriation of one million dollars a year, to be at the disposal of the chief of the Children's Bureau for the promotion of the welfare and hygiene of mothers and children and for the reduction of infant mortality. No state is entitled to anything. No board need pass on any plan that the chief of the Children's Bureau desires to carry into effect. The Board of Trustees, Nov. 2, 1928, adopted a resolution declaring such legislation unwise and authorizing the Bureau of Legal Medicine and Legislation to take action to combat its enactment.

SOCIALIZATION OF MEDICINE

To enlarge and improve the hospital, domiciliary and outpatient dispensary facilities at the command of the Veterans' Bureau, for veterans and other beneficiaries, Congress appropriated, May 23, 1928, fifteen million dollars. Various bills were pending at the close of the year, to enlarge federal benefits allowed veterans disabled in service and gratuities granted them when sick or injured from causes having no relation to service. A tendency to extend federal medical and surgical treatment at the expense of taxpayers to employees in the civilian branches of the federal government is apparent.

Retirement of Medical Officers for Disabilities Incurred in the World War.—The bill giving to officers in the emergency army disabled in the World War a status equivalent to those of officers in the regular army similarly disabled became a law, May 25, 1928. This act has been construed as conferring its benefits only on such officers as have proved or can prove by evidence that their disabilities are due to service, and not on those officers whose disabilities were merely presumed to have a service origin, through certain arbitrary presumptions established by statute. This construction has been challenged by interested persons and if adhered to will probably be made the subject of amendatory legislation.

REORGANIZATION OF FEDERAL HEALTH ACTIVITIES

The so-called Parker bill, H. R. 11026, providing for the coordination and public health activities of the government, was passed by the Senate and House of Representatives but was vetoed by the President. The Ransdell bill, providing for the establishment of a National Institute of Health, was favorably reported by the Senate Committee on Commerce and was pending in the Senate at the close of the year. A bill authorizing the Public Health Service to investigate the means and methods for affording federal aid and discovering a cure for cancer was passed by the Senate and was pending in the House of Representaitves when the year ended. Various bills were pending in both houses of Congress, providing for the recognition of conspicuous services rendered by federal employees in the promotion of public health.

The Newton bill, to which reference has already been made, provides in effect for the establishment in the children's Bureau of the Department of Labor a Child Welfare Extension Service that in substance would duplicate the activities of the Public Health Service relating to the health of mothers and children.

REGULATION OF THE PROMULGATION OF REGULATIONS

The bill introduced to regulate the promulgation by federal officers of the regulations issued by them with respect to alcohol and narcotics remained in the Committee on the Judiciary of the House of Representatives at the close of the year.

COSMETICS

After a study to determine the best form for legislation to protect the public against harmful cosmetics, it seems best to draft such legislation on existing food and drug acts. It is expected that the bureau will be able to present something definite during the coming year.

MEDICAL DEFENSE

The usual annual statement concerning the activities of the medical defense committees of the several state medical associations was published in the AMERICAN MEDICAL ASSOCIATION BULLETIN, December, 1928. The problem of medical defense is one that cannot be solved by insurance against losses through claim based on alleged malpractice. This method of protection may help the individual practitioner who is insured and against whom a claim is made, but it constitutes a tax on medical provision exceeding an amount of all claims paid and the expense of compromising or defending claims. An insurance company providing indemnity against loss must necessarily collect in premiums amounts in excess of all losses paid by it and all expenses incurred in settling and defending claims and in collecting premiums; otherwise the company would not make a profit of the business and would not have any inducement to continue it. What is needed is organized effort by medical defense committees maintained by our several state medical associations to prevent claims based on alleged malpractice from arising. What the nature of such preventive measures must be, if any such measures are discoverable and practicable, can be determined only by a careful study of the conditions under which each claim rises and the conditions which prevent physicians from maintaining adequate defenses against claims when they are made. This function of the medical defense committee seems to be more important than its function of assisting in the settlement of claims after they have arisen.

REGULATION OF THE PRACTICE OF THE HEALING ART

A bill to regulate the practice of the healing art in the District of Columbia was pending before the Committee on the District of Columbia of the Senate, at the close of the year. Various bills to regulate the practice of osteopathy, naturopathy and chiropractic in the district were pending in Congress when the year ended.

The year has been marked by increased interest in basic science laws. The Bureau of Legal Medicine and Legislation has cooperated with Arkansas, Georgia, Idaho, Iowa, Kansas, Michigan and Oregon in framing legislation for introduction at the approaching sessions of their respective legislatures to carry into effect the principles underlying basic science laws already enacted in other states.

EXPERT TESTIMONY

The matter of expert testimony continues to arouse interest, but the interest aroused ends in discussion. The difficulty in the adoption of corrective measures arises not only out of constitutional provisions but out of the fact that there seems to be no adequate evidence of the need for legislation. The lawyer does not have to introduce an incompetent or dishonest expert witness into any case or to deceive any judge with respect to the qualifications of the witness whom he proffers. The judge is not required to permit any person to testify as an expert witness until he, of his own knowledge or through evidence offered by counsel, is satisfied that the proffered witness is an expert. When lawyers cease to proffer ignorant and dishonest witnesses as experts, and when judges cease to recognize as expert witnesses persons with whose qualifications as experts they are not fully satisfied, there will be no market for services of such witnesses. Until that time comes

1. H. R. 14070, A Bill to provide a Child Welfare Extension Service, and for other purposes.

and it has been determined how much of our difficulties arise out of failures on the part of lawyers and judges to exercise the rights and to discharge the duties they now have and how much is due to the inadequacy of laws governing the situation, it will be difficult to draft corrective legislation.

MISCELLANEOUS ACTIVITIES

With the retirement on account of ill health of Mr. J. L. Rosenberger, who has for years prepared for THE JOURNAL the abstracts of cases of medicolegal interest decided by all courts of last resort in this country, the work has been taken over by the Bureau of Legal Medicine and Legislation in cooperation with the editor.

The Annual Scientific Exhibit

The present plan of operation of the Scientific Exhibit was first put into effect at the San Francisco session in 1923. As the exhibit for 1929 is to be on the Pacific Coast, it is opportune to review briefly its growth. At San Francisco, there were forty-four exhibits with approximately fifty individuals participating. The total amount of floor space utilized at San Francisco was approximately 5,200 square feet. At the Minneapolis session last year the total number of exhibits was 114, the number of exhibitors approximately 250, and the amount of floor space approximately 16,500 square feet. Exhibits at San Francisco were excellent, but there has been material improvement each succeeding year. At San Francisco, personal demonstrations had not been emphasized as much as in the later exhibits. The personal demonstrations which served as models in the succeeding exhibits were inaugurated at the San Francisco session in the exhibit of Dr. Frank Hinman on hydronephrosis. At the Minneapolis session, noted research workers were constantly in their booths demonstrating the subjects at hand. Thus, in the last six years the Scientific Exhibit has reached a higher pinnacle than was expected by even the more optimistic members of the Committee. The widespread interest in the Scientific Exhibit, as manifested by the ever increasing number of applicants for space, permits selection from a much larger field of what is already choice material.

At San Francisco there were no section exhibits; at Minneapolis the five under the auspices were particularly impressive.

MINNEAPOLIS EXHIBITS

The type of exhibits at Minneapolis was unusually impressive. Personal demonstrations, which have become one of the fixed policies of the committee, were evident on all sides; even more stringent rules for expert demonstration have been devised for future exhibits. Strict admission requirements were enforced, so that only those who were Fellows of the Association, or guests, were permitted to visit the exhibits. Nevertheless, the hall was crowded at all hours. Closer contact between the work of the sections and the Scientific Exhibit was developed at this meeting. Many papers presented before the sections were correlated with exhibits, and notice of such correlation was indicated in the official program.

The Section on Obstetrics, Gynecology and Abdominal Surgery, with the American Social Hygiene Association cooperating, sponsored an exhibit on gonorrhea in the female. The year before there was an exhibit dealing with gonorrhea in the male. Thus, the scientific treatment of this subject was completed at the Minneapolis session. The exhibit was under the committee composed of Drs. Fred L. Adair, chairman, Charles C. Norris, Palmer Findley, Frederick J. Taussig, Frederick C. Holden and Walter M. Brunet.

The Section on Dermatology and Syphilology showed another of its well worked out exhibits, dealing with the granulomas except those of syphilis. The committee in charge was composed of Drs. C. W. Finnerud, F. J. Eichenlaub, H. E. Michelson and F. D. Weidman.

The first exhibit under the auspices of the Section on Radiology occurred at the Minneapolis session. The committee in charge was composed of Drs. R. G. Allison, B. H. Nichols and P. M. Hickey. Eight exhibits covered the following subjects: (1) visualization and nonvisualization of the gallbladder; (2) the use of iodized oil in the demonstration of pulmonary conditions, and (3) selected exhibits of educational and research value.

At the request of the Board of Trustees, the Section on Diseases of Children sponsored an exhibit dealing with (*a*) vitamins, particularly as applied to infant feeding, and (*b*) milk and its modifications. The committee appointed for this section was composed of Julius Hess, M.D.; LeRoy S. Palmer, Ph.D.; Harry Steenbock, Ph.D.; William Weston, M.D., and F. W. Schlutz, M.D., chairman.

At Minneapolis it was possible to group exhibits conveniently. This was particularly true of section exhibits, exhibits from the University of Minnesota and those of the American Medical Association.

The three special exhibits authorized by the Board of Trustees were centers of attraction. The Fresh Pathology Exhibit, replete with unusual surgical and necropsy material, was excellently demonstrated by a large corps of pathologists under the direction of Dr. Elexius T. Bell, professor of pathology, University of Minnesota Medical School, and Dr. William A. O'Brien, chairman of the Local Committee on Scientific Exhibit.

Continuing the program of last year were the seven exhibits under the direction of the Cooperative Committee on Fractures, composed of Drs. Nathaniel Allison, William Darrach and Kellogg Speed. In each booth there was a volunteer from the U. S. Army Medical Corps, acting as a subject for demonstration. A different demonstrator was present morning and afternoon in each of the booths. The aisles were crowded with interested spectators and listeners. Aiding the Cooperative Committee was an advisory committee and seventy physicians from all parts of the United States, who gave the demonstrations.

The third special exhibit dealt with diagnostic chemical methods. An almost complete laboratory was built on the auditorium floor with all facilities for modern diagnostic methods. Here were shown the advantages and the limitations of biochemical methods of diagnosis. The exhibit was in active charge of Dr. V. C. Myers, professor of biochemistry at Western Reserve University School of Medicine, with the collaboration of Drs. C. T. Way, J. F. McClendon, J. A. Killian and R. S. Hubbard.

Two classes of awards were made; so far as the committee has been able to gather, this method of making awards proved satisfactory. The variations in the individual exhibits and the tremendous amount of scientific work which they represented made it exceedingly difficult for the Committee on Awards to arrive at decisions. The exhibits ranged in scope from pathology through the specialties up to mathematical physics.

As the Scientific Exhibit has grown, the amount of executive and clerical work has increased enormously. Exhibitors have shown a commendable spirit of cooperation and in every instance have expressed appreciation of the fairness of having regulations rigorously enforced.

The Board of Trustees makes grateful acknowledgment to the section secretaries and to the various committees in charge of section and special exhibits for their splendid cooperation with the Committee on Scientific Exhibit, which has made the exhibit an outstanding event each year, not only in medicine, but in science in general.

The Central Scientific Exhibit

As a result of the increasing interest in the scientific exhibits at the annual sessions, suggestions were made, from various sources, that it would be of great value to medicine in general if the principal exhibits could be preserved.

In September, 1927, the Board of Trustees appointed a committee to consider the advisability of the establishment of a central scientific exhibit to be housed in the headquarters building of the Association, and to report back to the Board. The committee appointed consisted of Drs. Ludvig Hektoen, chairman, C. R. Bardeen, W. A. O'Brien, Thomas Ordway and David Riesman, and the director of the Scientific Exhibit, ex officio.

The committee submitted the following report to the Board of Trustees at its February, 1928, meeting:

1. That the maintenance in the home building of educational exhibits of professional, as well as of popular, interest be made a part of a permanent program of the Board.

2. That collectively such exhibits be designated as the Central Scientific Exhibit of the American Medical Association.

3. That the exhibits in the Central Scientific Exhibit be of changing, more or less semipermanent nature, designed especially to illustrate developments of particular interest for the time being, and that at least for the present the regular collection for permanent preservation of scientific museum specimens be not undertaken.

4. That suitable exhibits be secured and installed in the building of the Association so far as the present facilities may permit. An obvious source for such exhibits is the annual exhibit, from which desirable exhibits might be obtained either as the property of the Association or as loans under specified conditions.

5. That in future building plans for the Association special attention be paid to providing adequate space and facilities for the proposed Central Scientific Exhibit.

Finally, the committee ventures to suggest that if a permanent home of monumental character were to be projected for the American Medical Association, with commensurate plans for scientific and educational exhibits, for meeting places for special medical groups and for other features of general interest, special support for the undertaking might be obtained from various sources.

The Board of Trustees accepted the report and authorized the committee to undertake the beginning of the Central Scientific Exhibit.

At the Minneapolis session, recommendations for exhibits were made by the Committee on Awards; these were acted on by the Committee. Later the secretary, in cooperation with Dr. Woodward of the Bureau of Legal Medicine and Legislation, drew up a legal form of agreement between the donors (or loaners) and the American Medical Association. Five exhibits were shipped to the headquarters building in the fall of 1928, and have been installed.

The exhibits recommended were: two on tularemia by Dr. Edward Francis, U. S. P. H. S., and Dr. Walter M. Simpson, respectively; fundus changes in the eye in the constitutional diseases, syphilis, nephritis, diabetes, tuberculosis and some of the stationary and progressive types of cataracts, by Dr. Arthur J. Bedell; Leprosy by Dr. O. E. Denney, U. S. P. H. S.; Lymphoblastoma by Dr. Paul A. O'Leary and Dr. Hamilton Montgomery, as well as the entire exhibit of the Section on Dermatology and Syphilology.

Space on the sixth floor of the headquarters building has been made available which will accommodate additions for the next three years. In an undertaking of this sort, progress must necessarily be slow, so that the exhibit has not been ready for inspection until recently; but it is now open to visitors.

Committee on Visual Education

In accordance with the provisions of a resolution adopted by the House of Delegates at Minneapolis a Committee on Visual Education was appointed by the Board of Trustees. This committee as now constituted is as follows: Dr. Irving S. Cutter, Chicago, chairman; Dr. C. P. Emerson, Indianapolis; Dr. C. H. Davis, Milwaukee. Two or more meetings have been held and a program for providing films of educational value is being worked out with the active assistance of Eastman Educational Films, Inc.

Committee to Cooperate with Medical Director of Veterans' Bureau

A committee composed of Drs. Charles W. Richardson, J. H. Walsh and W. C. Woodward had a conference with Dr. E. O. Crossman, medical director, and Dr. R. D. Adams of the Veterans' Bureau at Washington on Dec. 5, 1928. Dr. Crossman submitted a plan, then in process of development. for the reorganization of the medical corps of the bureau. The purpose of the proposed reorganization is to make it possible to retain qualified physicians now in the service of the bureau and to attract a continuous supply of competent men to remain in this service as long as needed. The committee, after studying the plan as it had been developed at the time the conference was held, recommended that the Board of Trustees should neither approve nor disapprove the plan as submitted and that provision be made for further contact with the medical director of the Veterans' Bureau with a view of maintaining helpful relations between the Association and the bureau and of extending all possible cooperation in perfecting an efficient medical service in the bureau. The recommendations of the committee were adopted by the Board of Trustees.

Report of the Committee on Scientific Research for 1928

Twenty-two new grants (127 to 149) have been made, amounting to $11,299.61. In addition to the appropriation by the trustees for 1928, there has been placed at the disposal of the committee $500 donated by Cornelius Van Zwalenburg, Riverside, Calif., for support of study of the hydraulic factors in certain abdominal diseases. Except in two or three cases the grants have been made for necessary expenses for the proposed work. When grants have been made solely for salary, the other expenses of the work have been assumed by the institution concerned. Money granted has been paid to the financial officer of the institution with which the grantee is connected. In this way accurate accounts are insured of the moneys that are disbursed on requisition by grantees. Recent reports indicate that the work under the new grants is progressing satisfactorily.

NEW GRANTS

Grant 127: Roy L. Moodie, Santa Monica, Calif., $300 toward a study of the lesions associated with deafness among pre-Columbian Peruvians.

Grant 128: Olof Larsell, University of Oregon Medical School, $250 for work on the hematopoietic effect of nuclear extractives (continuation of grant 114, 1927).

Grant 129: Alexander Maximow, University of Chicago, $1,000 for technical assistance in tissue cultures.

Grant 130: P. E. Lineback, Emory University, $700 for study of the macula lutea. On account of illness the grantee did not see his way clear to accept the grant, which consequently has been canceled without prejudice.

Grant 131: Aldred S. Warthin and George R. LaRue, University of Michigan, $2,000 for investigation of broad fish tapeworm infestation in man (continuation of grant 96, 1926).

Grant 132: Fred T. Rogers, Charles L. Martin and J. Shirley Sweeney, Baylor University, $200 for study of the effect of the roentgen ray on the suprarenals.

Grant 133: F. Lowell Dunn, University of Nebraska, Omaha, $715 for spectophotometric analysis of biologic fluids.

Grant 134: E. B. Hart, University of Wisconsin, $600 for work on the distribution of an inorganic factor supplementing iron in the building up of hemoglobin.

Grant 135: G. A. Talbert, University of North Dakota, $300 for study of constituents common to the sweat, the blood and the urine (continuation of grants 104 and 122, 1927).

Grant 136: Konrad E. Birkhaug, University of Rochester School of Medicine and Dentistry, $500 for study of acute rheumatic fever.

Grant 137: N. Michels, School of Medicine, Creighton University, $500 for study of the round cell infiltrations in syphilitic lesions.

Grant 138: Harvey S. Thatcher, University of Arkansas, $250 for investigating the intestinal bacterial flora in pellagra. This grant has been refunded because the grantee found it impossible to obtain suitable clinical material for the study.

Grant 139: A. F. Coca, Roosevelt Hospital, New York, $240 for study of the susceptibility of human beings to horse serum.

Grant 140: Bernhard Steinberg, Toledo Hospital, $400 for study of recovery from experimental peritonitis.

Grant 141: Lester R. Whitaker, Boston University School of Medicine, $1,000 for research on the physiology and pathology of the gallbladder.

Grant 142: J. H. St. John, Army Medical School, Washington, $76 for expenses of work on the gametocytes in malaria.

Grants 143 and 146: W. R. Tweedy, Loyola University School of Medicine, Chicago, $568.61 for work on purifying the parathyroid hormone.

Grant 144: I. S. Falk, University of Chicago, $800 for research on the purification of diphtheria toxin and antitoxin.

Grant 145: Kamil Schulhof, John McCormick Institute for Infectious Diseases, Chicago, $600 for study of the physiologic action of thyroxin as compared with thyroglobulin.

Grant 146: See grant 143.

Grant 147: A. V. Hardy, State Hygienic Laboratories, Iowa City, $1,000 for work on the bacteriology of undulant fever.

Grant 148: John J. Morton, University of Rochester School of Medicine and Dentistry, $250 for work on intoxication in intestinal obstruction and strangulation (Van Zwalenburg Fund).

Grant 149: G. E. Burget, University of Oregon Medical School, $250 for study of the hydraulic pressure in closed intestinal loops (Van Zwalenburg Fund).

STATE OF WORK UNDER PREVIOUS GRANTS STILL PENDING

Grants 76 and 84, 1925, and grant 107, 1927: $500, $1,200 and $500, respectively, to Harry L. Huber, Chicago, for work on the chemical and immunologic properties of the pollens of hay-fever and allied conditions. Active work is in progress; articles on results obtained have been published.

Grants 78 and 91, 1925 and 1926: $400 and $1,200, respectively, to A. W. Meyer, Stanford University, for the study of polyneuritis and other changes from dietary deficiencies. The work has been completed, full account has been rendered of the expenses, and the results have been published: Studies on Scurvy (pages 107), Arthur W. Meyer and Lewis M. McCormick, Stanford University Publications, Medical Sciences, volume 2, number 2, 1928.

Grant 79, 1925: $100 to Margaret M. Hoskins, New York University, for a study of the effects of thyrotoxin on growth. The work has been completed, the expenses accounted for ($19.72 refunded), and the results published: Hoskins, Margaret M.: The Effect of Acetyl Thyroxin on the New-Born White Rat, *J. Exper. Zool.* **48:** 373, 1927.

Grant 81, 1925: $100 to William G. Lennox, Harvard Medical School, for work on epilepsy. The work has been completed and the results are in process of publication.

Grant 86, 1926: $250 to P. E. Lineback, Emory University, Georgia, for a study of the macula lutea and fovea centralis with especial reference to binocular vision. The work has been suspended on account of ill health. An account of the expenses has been rendered and refund made of $100. A preliminary report of the results has been published: Lineback, P. E.: Observations on the Fovea Centralis of Two Human and Seven Monkey Pairs of Eyes, *Anat. Record* **35:** 19, 1927.

Grant 87, 1926: $1,000 to Emory H. Hayhurst, University of Ohio, for study of silicosis. The work has been completed, an account has been rendered of the expenses, and the results are in process of publication.

Grant 88, 1926: $500 to Emory R. Hayhurst, Charles B. Morrey and Dana J. DeMorest, University of Ohio, for study of the effect of the products of carbonaceous combustion on the susceptibility to pneumonia. The work has been completed, the expenses accounted for ($14.48 refunded), and the results published: Resistance to Pneumococcus Infection as Influenced by Breathing of Gas Combustion Products, *Am. J. Pub. Health* **18:** 439, 1928.

Grant 93, 1926: $1,200 to Victor C. Jacobson, Albany Medical School, for study of the effects of high-voltage cathode rays on living tissue. The work is in progress. An article on the effects of high-voltage cathode rays on the skin of the rat has been published (*Arch. Path.* **5:** 195 [Feb.] 1928).

Grant 94, 1926: $800 to Robert L. Benson, University of Oregon Medical School, for experimental study of arteriosclerosis. The work has been completed and the results are being prepared for publication. Full account has been made of the expenses.

Grant 96, 1926: $2,000 to Aldred Scott Warthin and George R. LaRue, University of Michigan, for investigation of problems connected with the broad fish tapeworm, particularly as it occurs in Michigan. The work under this grant is completed, and account has been made of the expenses. The following are articles on results obtained: Warthin, A. S.: Increased Human Incidence of Broad Tapeworm Infestation in Great Lakes Region, THE JOURNAL, June 30, 1928, p. 2080. Vergeer, Teunis: Diphyllobothrium Latum (Linn., 1758), the Broad Tapeworm of Man, ibid., March 3, 1928, p. 673; Canadian Fish, A Source of the Broad Tapeworm of Man in the United States, ibid., May 26, 1928, p. 1687; An Important Source of Broad Tapeworm in America, *Science* **68:** 1749, 1928; New Sources of Broad Tapeworm Infestation, THE JOURNAL, Aug. 11, 1928, p. 396. Other articles are in press. The work is continued under grant 131, 1928.

Grant 99, 1926: $300 to Roy H. Turner, Tulane University, for study of the intestinal microbiology in pellagra and sprue. The work under this grant and a further grant of $300 in 1927 (119) is in active progress. Two articles dealing with results obtained are in press.

Grant 100, 1926: $100 to Fred T. Rogers, Baylor University, for study by means of the roentgen ray of the movements of the stomach during hunger. The work is completed, account has been made of the expenses, and the results have been published: Rogers, F. T., and Martin, C. L.: A Roentgenological Study of Gastric Hunger Motility in Healthy Men, *Am. J. Physiol.* **82:** 113 (Feb.) 1927.

Grant 101, 1926: $1,140.51 (Charles A. Brant Fund) to R. W. Hegner, Johns Hopkins University, for study of the relations of man to intestinal protozoa. The work under this grant is finished and account has been made of the expenses. Work in the same field is in progress under a further grant of $1,200 in 1927 (125). The following articles have been published: Hegner, Robert: The Ingestion of Red Blood Corpuscles by Trichomonad Flagellates, THE JOURNAL, March 10, 1928, p. 741; Experimental Transmission of Trichomonads from the Intestine and Vagina of Monkeys to the Vagina of Monkeys (Macacus Rhesus), *J. Parasitol.* **14:** 261 (June) 1928. Ratcliffe, H. L.: The Numbers of Trichomonads in Rats on Diets of Different Protein Content in Relation to the *p*H and Bacteria in the Cecum, *Am. J. Hyg.* **8:** 910, 1928. Sanders, Elizabeth P.: Changes in the Blood Cells of Kittens Resulting from Infections with Endamoeba Histolytica, ibid. **8:** 963, 1928. Justin; Andrews, and Sanders, Elizabeth P.: Changes in the Blood of Cats Infected with Trypanosoma Equiperdum, *Am. J. Hyg.* **8:** 947, 1928.

Grant 102, 1926: $250 to Helen Bourquin, University of South Dakota, for experimental study of diabetes insipidus. The work is completed, account of the expenses has been rendered, and the results published: Bourquin, Helen: Studies on Diabetes Insipidus, the Diuretic Substance, *Am. J. Physiol.* **83:** 125 (Dec.) 1927. See also grant 120.

Grant 103, 1926: $855 to Robert O. Loebel, Cornell University Medical School, for study of the gaseous exchange of normal and malignant cells. The work has been completed, full account has been made of the expenses, and the results are in process of publication.

Grants 104 and 122, 1927: $300 each to G. A. Talbert, University of North Dakota, for study of constituents common to sweat, blood and urine. The work has been completed, account has been made of the expenses, and the following articles on the results published: Talbert, G. A., and Rosenberg, L.: The Simultaneous Study of the Constituents of the Sweat, Urine and Blood, Also Gastric Acidity and Other Manifestations Resulting from Sweating: V. Gastric Acidity, *Am. J. Physiol.* **84:** 520, 1928. Silvers, S.; Forster, W., and Talbert, G. A.: VI. Sugar, ibid., p. 577; Haugen, C. O., and Talbert, G. A.: VII. Amino-Acids, ibid. **85:** 224, 1928. This work is being continued under grant 135, $300, 1928.

Grant 105, 1927: $1,800 to H. B. Ward, University of Illinois, for study of life history of broad fish tapeworm endemic in man in northern Minnesota. The work under this grant is still in progress. The work has disclosed conditions of such significance that an extensive study of the distribution and frequency of the parasite in the region in question has been undertaken by the State Board of Health of Minnesota.

Grant 106, 1927: $500 to Arthur M. Yudkin, Yale University, for work on experimental cataract and related changes. Work is in progress.

Grant 108, 1927: $750 to C. V. Green, Michigan State College, for study of inheritance of color blindness and hemophilia with especial reference to linkage. The work is completed, account has been made of the expenses, and the results are being prepared for publication by Charles B. Davenport of the department of genetics, Carnegie Institution of Washington.

Grant 109, 1927: $600 to C. B. Semerak, Rush Medical College, for study of the pathologic changes in carbon monoxide poisoning. The work is in progress.

Grant 110, 1927: $50 to Roy L. Moodie, Santa Monica, Calif., for illustrations in an article on pre-Columbian surgery in Peru. The money has been expended for the purpose stated.

Grant 111, 1927: $500 to William H. Manwaring, Stanford University, for work on fundamental problems in anaphylaxis and immunity. The work has been completed, account has been made of the expenses, and the results of the work are in process of publication.

Grant 112, 1927: $500 to Harold Cummins, Tulane University, for study of fetal hand and foot. The work has been finished, account has been made of the expenses, and the results are in process of publication.

Grant 113, 1927: $500 to Carl W. Apfelbach, Presbyterian Hospital, for work on the renal function after glomerular infarction. Work is in progress.

Financial Statement for 1928

Balance to credit of committee, Jan. 1, 1928	$ 578.10	
Appropriation for 1928	13,200.00	
Donation (C. Van Zwalenburg fund)	500.00	
Refund, grant 86	100.00	
Refund, grant 98	68.61	
Refund, grant 126	119.69	
Refund, grant 138	250.00	
		$14,816.40
Grants and Expenses Paid in 1928		
Grant 127, R. L. Moodie	$ 300.00	
Grant 128, Olof Larsell	250.00	
Grant 129, Alexander Maximow	1,000.00	
Grant 131, Alfred S. Warthin and G. R. LaRue	2,000.00	
Grant 132, Fred T. Rogers	200.00	
Grant 133, F. Lowell Dunn	715.00	
Grant 134, E. B. Hart	600.00	
Grant 135, G. A. Talbert	300.00	
Grant 136, Konrad E. Birkhaug	500.00	
Grant 137, N. Michels	500.00	
Grant 138, Harvey S. Thatcher	250.00	
Grant 139, A. F. Coca	240.00	
Grant 140, Bernhard Steinberg	400.00	
Grant 141, Lester R. Whitaker	1,000.00	
Grant 142, J. H. St. John	76.00	
Grant 143, W. R. Tweedy	68.61	
Grant 144, I. S. Falk	800.00	
Grant 145, Kamil Schulhof	600.00	
Grant 146, W. R. Tweedy	500.00	
Grant 147, A. V. Hardy	1,000.00	
Grant 148, John J. Morton	250.00	
Grant 149, G. E. Burget	250.00	
Clerical expenses	600.00	
Traveling expense	397.12	
Sundry supplies	46.77	
		12,843.50
Balance		$ 1,972.90

Grant 114, 1927: $500 to Olof Larsell, Oregon University Medical School, for work on hematopoietic effect of nucleic acid and nucleoproteins. Account has been made of the expenses, and the results have been published: Larsell, Olof; Phillips, B. I., and Jones, N. W.: Hemopoietic Effect of Nuclear Extractives from Kidney, Pancreas and Spleen in Experimental Hemolytic and of Human Pernicious Anemia, *Proc. Soc. Exper. Biol. & Med.* **25:** 788, 1928. The work is being continued under grant 128, 1928.

Grant 115, 1927: $100 to J. Earl Else, University of Oregon Medical School, for experimental work on the surgery of the esophagus. Work is in progress.

Grant 116, 1927: $750 to Laurence H. Snyder, State College, Raleigh, N. C., for study of blood grouping in relation to clinical and legal medicine. The work is in active progress.

Grant 117, 1927: $250 to Warren H. Hunter, University of Oregon Medical School, for study of experimental chronic nephritis. The work is in progress.

Grant 118, 1927: $1,000 to Edward Reynolds and Earnest A. Hooton, Harvard University, for study of the mechanism of erect posture. The work is nearing completion.

Grant 119, 1927: $300 to Roy H. Turner, Tulane University, for work on the microbiology in pellagra and sprue. This is a continuation of the work under grant 99, 1926.

Grant 120, 1927: $500 to Helen Bourquin, formerly of the University of South Dakota, now of the University of Michigan, for experimental study of diabetes insipidus. The work is in progress (continuation of work under grant 102, 1926).

Grant 121, 1927: $400 to Arthur H. Smith and Theodore S. Moise, Yale University, for study of the relation of diet to renal physiology and pathology. The work has been finished, account has been made of the expenses, and the results are in process of publication.

Grant 123, 1927: $500 to Sanford R. Gifford, University of Nebraska Medical School, for study of the chemical properties of the normal and cataractous lens. The work is in progress.

Grant 124, 1927: $500 to Alfred T. Shohl, Yale University, for work on calcium-phosphorus metabolism in rats on faulty diets. The work has been finished, account has been made of the expenses, and the results are in process of publication.

Grant 125, 1927: $1,200 to Robert Hegner, Johns Hopkins University, for the study of relations of man to intestinal protozoa. This grant provides for continuation of the work under grant 96, 1926.

Grant 126, 1927: $500 to Thurston L. Johnson, University of Arkansas, for study of zone phenomena in trypanosomiasis. The work has been completed, account has been made of the expenses ($119,69 refunded) and the report of the results is in press.

MEETING OF THE COMMITTEE

A meeting of the committee was held in Chicago, March 11, 1928, at which all the members were present.

APPLICATIONS ON HAND AND RECOMMENDATIONS

Several important requests for aid are now under consideration. The committee recommends that, for 1929, $12,000 be appropriated for grants in aid of medical research and $1,200 for clerical, meeting and other committee expenses.

Respectfully submitted.

N. W. JONES, Portland, Ore.
Term expires, 1929.
MARTIN H. FISCHER, Cincinnati.
Term expires, 1930.
LUDVIG HEKTOEN, Chicago, Chairman.
Term expires, 1931.
C. C. Bass, New Orleans. Term expires, 1932.
JOHN J. MORTON, Rochester, N. Y.
Term expires, 1933.

COMMITTEE ON SCIENTIFIC RESEARCH OF
THE AMERICAN MEDICAL ASSOCIATION.

Report of the Advisory Committee on Trachoma Among the Indians

Since the last report of this committee there has appeared an exhaustive report on "The Problem of Indian Administration" by the Institute for Government Research. This report is the result of a thorough survey, conducted by a competent staff under the direction of Lewis Merriam, the former head of the census bureau.

This staff of investigators devoted eighteen months to the task, nearly half of which time was spent in the field. They visited ninety-five Indian jurisdictions and studied carefully every phase of the government's work.

Unquestionably this is a most opportune and valuable survey. It points out the defects of the management of the health of the Indians on their reservations and in the government boarding schools and hospitals. It stresses the deficiency of fresh food in such schools and the lack of properly balanced rations for the children.

The observations of our committee are in many respects in accord with those described in the Merriam report. However, we disagree with the idea expressed or intimated in the report that trachoma is a food deficiency disease, for too frequently it has been seen in well nourished as well as in undernourished persons and is by no means a frequent accompaniment of malnutrition.

Some years ago, probably influenced by ill advice, the Bureau of Indian Affairs issued an order requiring that all physicians in the Indian Service learn to do the operation of tarsectomy for the treatment of trachoma. This resulted in a wild crusade of indiscriminate operating on the eyelids, even in very recent cases of the disease and in young children before any other treatment had been used. Some overzealous enthusiasts even went so far as to advocate the operation as a preventive of the disease. The resulting disfigurement of the lids, and the difficulty of making subsequent treatments of the conjunctiva because of the contractions, are apparent in numerous cases that we have observed.

When the evils of this course were pointed out to the former Secretary of the Interior, Dr. Hubert Work, he wisely issued an order to the effect that the operation of tarsectomy should not be practiced except in suitable cases to be determined by the eye specialist in charge.

In our previous report we commended the action of the government in establishing special schools for trachomatous children, to which would be sent from other schools children affected with the disease, there to be treated until cured and then returned to their original school.

The boarding schools of Fort Defiance, Ariz., Shiprock, N. M., and Tahatchi, N. M., were set aside as such special centers for the treatment of trachoma.

We understand that the operation of this plan has not been extended and has not been carried out as originally proposed. In all the schools that we have visited children with trachoma are present; they are not sent to the special trachoma schools, and, what is worse, they are not even segregated but mingle freely with the other children in dormitory, classroom and playground. Because of this the disease is known to be disseminated among healthy children.

Doubtless this neglect is due to the deficiency in facilities, equipment and service as pointed out by the Merriam report and is the result of the inadequate appropriation of the government for the Indian Service.

Our committee is strongly and unanimously of the opinion that the welfare of the Indians would be greatly enhanced if all matters that relate to their health or to their disease could be placed under the management or control of some medical body suitably equipped and organized to take care of such matters. Such an organization we already have in the Public Health Service, which has a record of efficiency that is in striking contrast to the dismal failures of the Indian Service.

Almost none of the hospitals come up to the standards set by the American Medical Association or the American College of Surgeons.

Therefore, your committee unanimously recommends that a transfer of the management of health matters among the Indians be made from the Indian Medical Service to the Public Health Service. If such a transfer should be made we see no reason why this advisory committee on the subject of trachoma should be continued unless it should be so desired by the Department of the Interior. We therefore respectfully request that our committee be discharged.

WILLIAM H. WILDER, Chairman.
ARNOLD KNAPP.
WILLIAM CAMPBELL POSEY.
F. I. PROCTOR.

Headquarters Building

The most important question that is now commanding consideration by the Board of Trustees has to do with the housing of the business and professional activities of the Association.

In 1891 all business was transacted in one room, about 12 by 15 feet in size, where two or three employees constituted the administrative personnel. About 1894, slightly larger quarters were taken, from which removal was forced by a fire three years later. After the fire, what some regarded as palatial quarters were taken on Market Street, consisting of one large room about 100 by 125 feet in area. Here the Associations's first linotype machine was installed—an event of importance in which great pride was felt. About 1902 the first real estate to be owned by the Association was purchased, a part of the property now occupied on North Dearborn Street. Here a three story building, 40 by 80 feet, was erected. It was felt by some of the officers of the Association that the third story of this building was a real extravagance; but within the space of two years an additional floor had to be put on and the entire building enlarged by extension of 40 feet. In the meantime more property, fronting on Grand Avenue, was bought. After five years it was necessary to have much larger quarters, and a six story building was erected on the corner of Dearborn Street and Grand Avenue occupying a space 60 by 100 feet. It was predicted that this new building would be adequate for all time, but it soon became necessary to reclaim two stories of the old building which had been rented. Before ten years

had passed this latest building had to be enlarged by an L-shaped addition which practically doubled the capacity and provided a total floor space of 112,500 square feet, above a subbasement in which furnaces, pumps and other house machinery were placed.

There was no thought but that with the completion and occupation of this larger building, now in use, the housing problems of the Association would be solved. For a little more than a year the entire sixth floor. was not used except for storage purposes, but this floor is now used by three departments, and the part not so used is all that is left in the present building for storage. When the constant demands for additional room for various departments can no longer be denied, the sixth floor must provide the needed space, and then the present building will have no storage facilities so essential for efficient and economical operation.

The expansion of the activities of the Association, old and new, has been far more rapid and its output far greater than could have been foreseen ten, or even five, years ago. There are now nearly 500 persons at work every day in the headquarters building. The weekly pay roll—exclusive of monthly salaries paid—is from $12,500 to $13,400. Reference to financial statements that are included in this report will show that total receipts from all sources in 1928 were more than $1,500,000 and that the costs of operation were more than $1,300,000. The auditors' report places the net assets of the Association at $2,184,989.13.

The present building is well constructed and has been maintained in good condition. It was built for utilitarian purposes and without esthetic considerations. It is a good factory building, in no way different in physical appearance from hundreds of other buildings used strictly for the purposes of trade. There is nothing about its external appearance to indicate that it is the home of the largest scientific society of physicians in the world. At the time it was erected, this building was more than adequate but it is now or will soon be entirely inadequate to serve the needs of a growing business and an efficient and economical administration. The increasing work of some departments now demands more room, and others will soon be in similar position if their expansion meets present indications. The growth of circulation of the Association's publications or their further improvement will necessitate the employment of additional personnel, the purchase and installation of new machinery and the replacement of old. Storage facilities must be had in the building, for the sake of economy and efficiency. The building now occupied does not permit of the location of departments with due regard for necessary correlation of work, convenience of communication, and possibilities of time saving and economical operation.

For some years it has been in the minds of officers and other Fellows that much of the extremely valuable educational material in the Scientific Exhibit at each annual session should be preserved and utilized. The Board of Trustees, through the assistance of a committee, has established the beginnings of a Central Scientific Exhibit, referred to elsewhere in this report. It is believed that this movement is worthy of such support as may be necessary to realize its full possibilities as a means of promoting scientific medicine and establishing a record of scientific reseach and advancement. As growth is attained, adequate housing and facilities for useful demonstration must be provided that cannot be found in the building now used. Donations may be secured from outside sources that can be used for the development and maintenance of the Central Scientific Exhibit, already modestly started and susceptible of expansion into a truly great institution under the direct auspices of this association.

The growing circulation and possible further improvement or enlargement of the publications of the Association will soon necessitate the installation of new machinery in addition to necessary replacement of machines now much worn from years of service day and night. Economy demands that such replacements must in some instances be effected through installation of new machines larger and of greater capacity than those now in use. This means that more room must be had if reasonable expectations are realized.

Foreseeing needs now forcefully apparent, we have been careful to build up a surplus as large as could be accumulated without hampering the work and expansion of the Association. A relatively large part of this surplus must be kept in hand to insure the uninterrupted course of business, even in the face of emergencies that cannot be foreseen but that may develop into crises calling for unusual and immediate outlay. The surplus that has been accumulated is, nearly all of it, invested in bonds of approved quality. As a further safeguard, in addition to the creation of a reasonable surplus, the board has secured title to 120 feet on Grand Avenue immediately adjacent to that on which our building stands. This property has been paid for and is unencumbered.

Enough has been said to show that we are confronted with a problem of housing that must be properly solved within the near future. What shall be done? How shall needed funds be secured? What sort of building should be planned: another of the strictly factory type, or one that will express physically and spiritually the deals of the Association? A building of the latter type would stand as a monument to the achievements of scientific medicine in the United States.

The Board of Trustees, having considered these questions for nearly two years, is convinced that a new and larger building should be erected and that it should be one having real significance as the home of the American Medical Association. It should, of course, provide adequate space for the publishing activities, for the offices of the Councils, and Bureaus and executives who administer our affairs, for storage, for the Library and the Exhibits. But it must be far more than this. Outwardly and inwardly it must express the scientific strength, the high ideals, the humane spirit and the power of more than a hundred thousand physicians who have dedicated themselves to the advancement of knowledge and the service of mankind.

It must be borne in mind that the erection and maintenance of such a building will occasion increased annual outlay. This means, of course, that annual income must also be increased. The demands made on the Association for service of many kinds are constantly growing. Some of these are demands that are, perhaps, unreasonable because the service expected is not within the scope of the provisions of the charter and is not compatible with the expressed objects of the Association. Many others, however, are demands that are altogether justified because of the changed and changing conditions of the times and can be met only through the agency of this Association or that of some other organization devised for the purpose of serving our own members. It will be far better for us to provide what is necessary than to lose the right and the privilege of doing for ourselves what needs to be done.

By increasing the subscription price of THE JOURNAL, from which the largest part of the Association's income is secured, it is believed that maintenance costs can be met and reasonable expansion of service facilities can be effected. THE JOURNAL is now provided at a price far below that charged for any scientific publication even approaching it in scope or excellence. Its subscribers are, for the most part, the members of the Association, for whom the benefits of its activities are provided. The value of THE JOURNAL is far greater than its cost and always will be. Its subscribers will not only have "value received" after the subscription price is raised, but through their support will make possible the needed expansion of the Association's facilities.

Members of the Association, as such, are not now called on for any direct financial support. They pay no dues. The Constitution provides that funds may be secured through an assessment of not more than $10 on each member, but no assessment has ever been levied. There are now approximately 97,000 names on the roll of members. Without doubt most if not all of these 97,000 will account it a privilege to have some part in the enterprise of providing a home for the Association that will enable it to carry on worthily.

The great cathedral, the beautiful temple of justice, the well designed school building, the towering pile devoted to commerce—all have a very real significance aside from their appeal to the eye as architectural triumphs. They represent the beauty, the righteousness, the dignity and the strength of religion, law, education and honorable business; and so would a building erected by and for the organized medical profession

in the United States not only serve a pressing material need but would symbolize its aims and purposes and memorialize the sacrifices, the service and the achievements of medicine in our own country. Every member of the nearly 100,000 would honor himself and his profession in contributing according to his means to this enterprise.

Since it is true that a large part of the work of the American Medical Association has, over a long period, been carried on in the direct interest of the public, it would seem reasonable to expect that aid may be secured in our building program and in support of some of the philanthropic and educational activities of the Association from persons or groups outside of the profession.

Up to this time the Association has made no appeal for contributions to support its work or to provide facilities for carrying it on. Such donations as have been received have come unsolicited and have been used for the purposes indicated by the donors. The sum of all gifts received is almost insignificant when compared with expenditures made by the Association from its own funds. It would be ideal if what is needed for the future could be had from earnings, but there is no hope that this ideal can be realized because our work has grown and new demands are being created to an extent that makes it apparent that income cannot be increased enought to meet all the needs of the situation confronting us. In recommending, as it does, that the subscription price of THE JOURNAL shall be increased, the Board of Trustees does not intend that additional income so secured shall be counted on for building purposes. It will be needed for new personnel, new equipment, expansion and maintenance. If more money is secured from this source than is necessary for the purposes indicated, such surplus as may accrue can, of course, be applied to building costs, as may also be done with a reasonable part of surplus already accumulated. But funds for a new building such as the Association deserves to have must come from other sources.

The support of the House of Delegates and of every member of the Association is earnestly asked for in this important movement, which must succeed if the full duty of the Association to scientific medicine, to its own members and to society is to be worthily performed.

EDWARD B. HECKEL, Chairman
J. H. WALSH, Secretary
A. R. MITCHELL
D. CHESTER BROWN
E. H. CARY
JOSEPH A. PETTIT
J. H. J. UPHAM
CHARLES W. RICHARDSON
ROCK SLEYSTER

ADDENDA TO REPORT OF THE BOARD OF TRUSTEES

TREASURER'S REPORT

Report of the Treasurer of the American Medical Association for the year ending Dec. 31, 1928

Reserve Invested as at Dec. 31, 1927		$859,113.50
Less Government Bonds called		25,000.00
Total Invested at Cost		$834,113.50
Balance for Investment Dec. 31, 1927	$ 45,095.65	
Interest on Investments	38,389.00	
Interest on Bank Balance	933.57	
Government Bonds Called	25,000.00	
	$109,418.22	
Less Real Estate Investment	55,000.00	54,418.22
Invested and Uninvested Reserve as at Dec. 31, 1928		$888,531.72

DAVIS MEMORIAL FUND

Bonds, 3rd Liberty Loan (at cost) Dec. 31, 1927	$ 3,708.25	
Gain on Bonds called Sept. 15, 1928	291.75	4,000.00
Bank Balance Dec. 31, 1927	$ 1,487.81	
1928 Interest on Bonds	170.00	
1928 Interest on Bank Balance	77.48	1,735.29
Total Fund as at Dec. 31, 1928 on Deposit		$ 5,735.29

AUSTIN A. HAYDEN, Treasurer.

AUDITOR'S REPORT

Jan. 17, 1929.

To the Board of Trustees,
American Medical Association, Chicago, Illinois.

Dear Sirs:

In accordance with your instructions, we have audited the accounts of the American Medical Association for the year ended December 31, 1928, and have prepared therefrom, and append hereto, the statements undermentioned:

Exhibit "A"—Balance Sheet, as at December 31, 1928.
Exhibit "B"—Income Account, for the year ended December 31, 1928.

Schedules, for the year ended December 31, 1928:
Schedule "1"—Journal Operating Expenses.
Schedule "2"—Association and Miscellaneous Expenses.

We certify that the Balance Sheet and Income Account correctly present, in our opinion, the financial position of the Association as at December 31, 1928, and the results of its operations for the year ended on that date, subject to the following qualifications:

(1) The Inventories of Materials, Supplies and Work in Progress, $111,045.22, are stated in accordance with affidavits sworn to by responsible officials of the Association and have not been verified by us in any way.

(2) In accordance with the established practice of the Association, no provision has been made for (*a*) accrued interest on bonds, (*b*) memberships and subscriptions due and unpaid, (*c*) accrued salaries and wages and (*d*) accrued taxes.

(3) Depreciation has been computed on diminishing values at rates which normally apply to cost of Property and Equipment.

We have pleasure in reporting that the books are maintained in excellent condition and that every facility was afforded us for the proper conduct of the audit.

Yours truly,

PEAT, MARWICK, MITCHELL & Co.

EXHIBIT "A"

BALANCE SHEET AS AT DECEMBER 31, 1928

ASSETS:			
Property and Equipment (at cost, less depreciation):			
Real Estate and Buildings			$ 768,911.01
Machinery			115,662.47
Type and Metal			12,363.76
Furniture and Equipment			56,261.85
Chemical Laboratory			3,331.48
Library			466.01
Total Property and Equipment			$ 956,996.58
Investments (at cost):			
U. S. Government Securities		$ 288,332.75	
Railroad, Municipal and Other Bonds		545,780.75	834,113.50
Cash held by Treasurer for Investment			54,418.22
Cash in Bank and on Hand—General Account			95,285.62
Temporary Investments—Certificates of Deposit			100,000.00
Notes Receivable			1,770.00
Accounts Receivable:			
Advertising		$ 102,015.61	
Co-operative Medical Advertising Bureau		11,642.70	
Reprints		5,961.54	
Miscellaneous		15,847.93	135,467.78
Inventories of Materials, Supplies and Work in Progress			111,045.22
Expenditure on Publications in Progress			100,885.54
Prepaid Expenses—Insurance, etc			3,738.41
Total			$2,393,720.87
LIABILITIES:			
Accounts Payable:			
Co-operative Medical Advertising Bureau			$ 10,655.80
Miscellaneous			1,017.14
			$ 11,672.94
Subscriptions Paid in Advance			47,793.51
Advance Payments on Publications			149,265.29
Net Worth:			
Association Reserve Fund		$ 250,000.00	
Capital Account:			
Amount thereof as at December 31, 1927	$1,708,527.34		
Net Income for the year ended December 31, 1928	226,461.79	1,934,989.13	
Net Worth as at December 31, 1928			2,184,989.13
Total			$2,393,720.87

EXHIBIT "B"

INCOME ACCOUNT

FOR THE YEAR ENDED DECEMBER 31, 1928

JOURNAL:		
Gross Earnings:		
Fellowship Dues and Subscriptions		$ 467,547.63
Advertising		890,773.65
Jobbing		93,909.28
Reprints		1,620.57
Books		13,603.57
Insignia		5,289.63
Miscellaneous Sales		13,393.88
Interest		6,130.39
Gross Earnings from Journal		$1,492,268.60
Operating Expenses—Schedule "1"		932,355.46
Net Earnings from Journal		$ 559,913.14
Miscellaneous Income:		
Rents	$ 2,400.00	
Sundry Publications	15,221.37	17,621.37
Association Income:		
Income from Investments	$ 39,322.57	
Income from Other Sources	9,286.04	
New Property	6,512.50	55,121.11
Gross Income		$ 632,655.62
Association Expenses—Schedule "2"	$258,727.21	
Miscellaneous Expenses—Schedule "2"	147,466.62	406,193.83
Net Income		$ 226,461.79

SCHEDULE "1"

JOURNAL OPERATING EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1928

Wages and Salaries			$411,103.29
Editorials, News and Reporting			12,949.14
Paper—Journal Stock			270,647.00
Paper—Miscellaneous			7,173.27
Electrotypes and Engravings			11,484.64
Binding			1,681.53
Ink			4,539.14
Postage—First Class			28,758.14
Postage—Second Class			58,130.20
Journal Commissions			10,822.12
Collection Commissions			1,435.98
Discounts			27,665.28
Express and Cartage			4,514.53
Exchange			3,346.38
Office Supplies			4,000.59
Telephone and Telegraph			2,634.67
Office Jobbing			9,824.32
Power and Light			6,913.67
Factory Supplies			11,407.37
Repairs and Renewals—Machinery			6,327.37
Loss on Bad Debts			1,233.32
Miscellaneous Operating Expenses			15,287.05
Total Journal Operating Expenses before provision for depreciation			$911,879.00
Depreciation on Equipment:			
Machinery	* 10%	$12,851.39	
Furniture and Equipment	10%	4,887.36	
Factory Equipment	10%	1,363.96	
Type	10%	519.12	
Metal	10%	854.63	20,476.46
Total Journal Operating Expenses			$932,355.46

* All depreciation is computed on diminishing balances.

SCHEDULE "2"

ASSOCIATION AND MISCELLANEOUS EXPENSES

FOR THE YEAR ENDED DECEMBER 31, 1928

Association Expenses:	
Association	$ 83,134.97
Health and Public Instruction	23,347.13
Pharmacy and Chemistry	19,286.57
Chemical Laboratory	19,208.43
Medical Education and Hospitals	48,184.66
Organization and Field Secretary	2,414.96
Therapeutic Research	3,122.90
Legal Medicine and Legislation	25,399.38
Bureau of Investigation	19,100.35
Physical Therapy	8,841.47
Central Scientific Exhibit	713.86
New Property	5,602.36
Laboratory Depreciation—10%	370.17
Total Association Expenses	$258,727.21
Miscellaneous Expenses:	
Insurance and Taxes	$ 18,718.87
Legal and Investigation	2,582.35
Building Expenses	33,266.03
Building Depreciation (2% on diminishing balances)	11,463.67
Fuel	5,295.03
Sundry Publications	76,140.67
Total Miscellaneous Expenses	$147,466.62

REPORT OF THE JUDICIAL COUNCIL

To the Members of the House of Delegates of the American Medical Association:

The amount of business before the Judicial Council since the last annual session has been less than in any of several preceding years. Most of the communications received have dealt with questions previously ruled on by the Council.

APPLICATIONS FOR FELLOWSHIP

The Council has found it necessary to reject or to suspend action on an unusually large number of applications for Fellowship. All such applications have, of course, come from members of the Association reported as in good standing in constituent state medical associations and in component county medical societies. The number of rejections is very small when compared with the number of applications accepted, but it is large enough in comparison with the number of rejections in other years to impress the Council with the need for careful consideration by county societies of all applications for membership. Several constituent state medical associations and a few county component medical societies have adopted the plan of securing information available in the biographic records of the American Medical Association before enrolling any new member.

DIVISION OF FEES

The division of fees is a subject that has been agitated rather vigorously in several states. There seems to be a tendency on the part of some physicians to turn the Principles of Medical Ethics to the defense of fee splitting. This grows out of the fact that the wording of a part of section 3 of article VI of the Principles of Medical Ethics is, perhaps, somewhat ambiguous. It is clear that it is the intention of this section to declare fee splitting to be an unethical procedure. The first sentence states that it is detrimental to the public good and degrading to the profession to give or to receive a commission. The next sentence, however, refers specifically to division of fees, thus making a differentiation, as some see it, between "commission" and "division of a fee." The Judicial Council does not hold to this view but rather to the opinion that a division of a fee constitutes a giving and a receiving of a commission.

The particular sentence in the Principles of Medical Ethics which causes the existing confusion, and which has been held by some to establish fee splitting as an ethical practice, is as follows:

> It is also unprofessional to divide a fee for medical advice or surgical treatment, unless the patient or his next friend is fully informed as to the terms of the transaction.

If the very language of section 3 of article VI of the Principles of Medical Ethics is to be cited in defense of a practice which its manifest purpose was to condemn, then surely this section needs to be amended. The Judicial Council therefore recommends to the House of Delegates that section 3, article VI, chapter II, of the Principles of Medical Ethics be amended so that the section will read:

COMMISSIONS

SEC. 3.—When a patient is referred by one physician to another for consultation or for treatment, whether the physician in charge accompanies the patient or not, it is unethical to give or to receive a commission by whatever term it may be called or under any guise or pretext whatsoever.

PRACTICES UNDER COMPENSATION LAWS

Communications from New Jersey have raised certain questions as to conditions of medical practice under existing compensation laws. These questions concern those provisions of such laws which appear to encourage the practice of medicine by corporations, to curtail the privileges of the individual employee with respect to the free choice of his medical attendant, to interfere with the rights and privileges of physicians not connected with corporations, and also to touch on matters of ethics.

The American Medical Association cannot control legislation or the administration of law. The compensation acts of the various states differ widely in their provisions affecting the questions mentioned. Some of them are manifestly inequi-

table as they affect the practice of medicine and the best interests of employees and the public. The remedy must be sought at the hands of legislatures in the several states, and it would seem to be the responsibility of the constituent state association to instigate measures seeking relief if the initiative to that end is not taken by the law makers and the administrative officers of the state. The American Medical Association will render such aid as it can give through its Bureau of Legal Medicine and Legislation.

Complaint has come from two or more states that certain physicians have permitted their names to be posted in factories and elsewhere in such a manner as to conflict with the provision of that section of the Principles of Medical Ethics which prohibits solicitation of patients. Here again the laws of the states obtrude, since some of them specifically provide that an industry or an employer must post the names of physicians whose services are available to employees.

The determination of some questions of ethics must depend on the law; and the individual state medical association, as it holds original jurisdiction in such matters, must consider these questions, deal with them in the light of the law, and seek to effect needed corrections.

PROPOSED SURVEY OF MEDICAL CHARITIES

At the Minneapolis Session President Jackson, in an address to the House of Delegates, discussed the abuse of medical charity and suggested that a survey of all medical charities be made. The reference committee to which Dr. Jackson's address was referred approved "the principle of the President's recommendation for the investigation and classification of medical charities through the Judicial Council."

While the House of Delegates in adopting the report of the reference committee did not assign to the Judicial Council any specific duty, the Council has given some thought to the factors involved in the conduct of a survey of the kind proposed and is of the opinion that it will require a large sum of money and an extensive organization. It will probably take considerably more than one year to discover the facts concerning the scope and conditions of medical charities as they now exist. Moreover, the scene is constantly shifting and the process would, for that reason, be a continuing one.

Investigations are now being made in some of our largest cities, where local medical societies are attempting to deal with untoward conditions; other organizations are conducting comprehensive studies which are thought to have an important bearing on the objects of the proposed survey.

The Judicial Council does not have the machinery necessary for making extensive economic studies, and there is doubt in the minds of its members that enterprises of this kind should be undertaken by the Council.

SUPPLEMENTARY REPORT

The Council will, if possible, submit a supplementary report dealing with medical services in schools and colleges at a later session of the House of Delegates.

GEORGE EDWARD FOLLANSBEE, Chairman.
JAMES B. HERRICK.
F. W. CREGOR.
J. N. HALL.
DONALD MACRAE, JR.
OLIN WEST, Secretary, ex officio.

REPORT OF THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS

To the Members of the House of Delegates of the American Medical Association:

I. MEDICAL EDUCATION

Of the eighty medical schools existing in 1928, seventy-two were rated in class A and two were in class B because of their prospects of making improvements. There are six, however, which never had a rating higher than very low in class C and were deficient from many points of view. Three years ago, two of them were convicted of being diploma-mills and their charters were revoked. Two others have published literature, which, in effect, was misleading, were affiliated with osteopathy, or otherwise were of seriously low grade. During the last fifteen years, state licensing boards in increasing numbers have withdrawn recognition from these schools until now, official reports show, they are not recognized in forty-six states and the territory of Alaska. Their diplomas, therefore, are of little or no value to their holders. Nevertheless, the schools have continued to admit students and charge tuition fees two or three times higher than are required by any of the twenty-eight state university medical schools, the diplomas from which make their holders eligible to practice medicine in any state. Poorly qualified students who can find no other place of refuge flock to these unrecognized institutions. In 1928, therefore, the Council on Medical Education and Hospitals decided to discontinue publishing the names of these class C institutions among recognized medical schools. It was voted, also, that hereafter only those medical schools securing a rating in either class A or class B would be recognized as medical schools. Under this ruling the four class C institutions still existing will no longer be included among medical schools:

Chicago Medical School
College of Physicians and Surgeons, Boston
Middlesex College of Medicine and Surgery, Cambridge, Mass.
Kansas City University of Physicians and Surgeons

The charters of the two following class C institutions were revoked, respectively, June 23, 1926, and May 23, 1927, after they had been convicted of being engaged in the sale of medical diplomas:

Kansas City College of Medicine and Surgery
St. Louis College of Physicians and Surgeons

Two other institutions were chartered evidently as substitutes for the two whose charters were revoked, respectively:

American Medical University
Missouri College of Medicine and Science

Such information as has been obtained regarding these institutions indicates that they are being conducted in the same manner and in the same buildings, if not also by the same group of individuals as their outlawed predecessors and, therefore, are deemed unworthy of recognition as medical schools.

It was voted also that hereafter holders of diplomas from such institutions be designated in the American Medical Directory as graduates of institutions not recognized as medical schools by the American Medical Association.

ENLARGEMENTS OF MEDICAL SCHOOL PLANTS

During the last twenty years new medical school buildings or enlarged teaching hospitals have been erected in forty-eight medical schools, of which more than twenty-four were new and complete medical teaching plants. Equally remarkable improvements, meanwhile, have been made in the medical schools of Canada. Within the last two years the greatly enlarged plants previously reported as under way at Columbia University and the University of Colorado have been completed, as have also new buildings at Howard University; at the State Universities of Iowa, Kansas and Tennessee, and at Johns Hopkins. The capacity of medical schools is continually being increased, thus making it possible to enroll constantly increasing numbers of medical students. This year the total enrolment in medical schools is estimated at 20,796, an increase of 251 over last year, even with the omission of the enrolment in four institutions no longer recognized as medical schools.

NEW MEDICAL SCHOOLS

In October, 1928, a new medical school was opened rather precipitately by the University of Southern California, which, it is hoped, will be maintained as an acceptable institution. This, with the seventy-four already referred to, will bring the total number of recognized medical schools to seventy-five. In the fall of 1930, the new medical school of Duke University plans to accept students, but probably only those of the third and fourth years. This may prove to be a wise plan, since North Carolina already has two recognized medical schools providing instruction in the first two years of the medical course.

INVESTIGATION OF STUDENT ENROLMENTS

A special investigation of student enrolments has been carried on during the last three years by Dr. Burton D. Myers of Indiana under the auspices of the Association of American Medical Colleges. The statistics explain at once the reports that enormous numbers of students each year are unable to secure admission to medical schools, and show that some individual students made application to as many as forty different medical schools. The figures brought out by the statistics during the last three college years are shown as follows:

	1926-1927	1927-1928	1928-1929
Number of applications	20,093	23,590	29,166
Number of applicants	8,500	11,282	12,537
Number accepted	6,420	6,495	7,014
Number refused	3,586	4,519	5,523

Thus, it will be seen that, on the average, each student applied to two or more medical schools. It may be noted that the number of students refused has increased by about 1,000 each year.

REASONS FOR THE REFUSALS

Formerly, owing to the varying standards held by medical schools, no student was so poorly qualified, apparently, that he could not gain admission somewhere. At present, however, all class A schools, in a fairly uniform manner, are refusing to admit students who are not properly qualified, both quantitatively and qualitatively.

This does not mean that all those refused are hopelessly forced out of medicine. For example, of the 3,586 refused in the fall of 1926, 1,339 reapplied in the fall of 1927 and 750 were accepted; of the 589 who were refused, 215 again reapplied in the fall of 1928 and eighty-six were accepted. Of the original 3,586 who were refused in 1926, therefore, 836 have since been accepted—probably after making up their quantitative deficiencies. Of those who had been refused during the previous year by five or more medical schools, forty-three reapplied the next fall, but all were again rejected. The present methods of admitting students, therefore, constitute an efficient weeding-out process by which the hopelessly unqualified are rejected and the worthy secure admission sooner or later, after securing the required credits. As expected, the numbers of the hopelessly unqualified will increase, but, as already shown, medical schools are making increased provision for those who are properly qualified.

SAVING TIME IN MEDICAL EDUCATION

During the last two years, the adoption of the continuous method of medical instruction, usually given under the so-called quarter system, has been strongly advocated, whereby a student can complete the four required college years of medical education of eight or nine months each in three calendar years. Under this plan any three consecutive quarters of completed work would count as a "college year." Indeed, the avowed adoption of this plan by the new school of medicine of Duke University has given fresh impetus to the movement and shows that the plan is considered feasible, even in the warmer climates of the Southern states. The quarter system is already in effect, or readily possible, in the following medical schools:

Stanford University School of Medicine, San Francisco
University of Chicago, Rush Medical College
Loyola University School of Medicine, Chicago
University of Minnesota School of Medicine, Minneapolis
Marquette University School of Medicine, Milwaukee

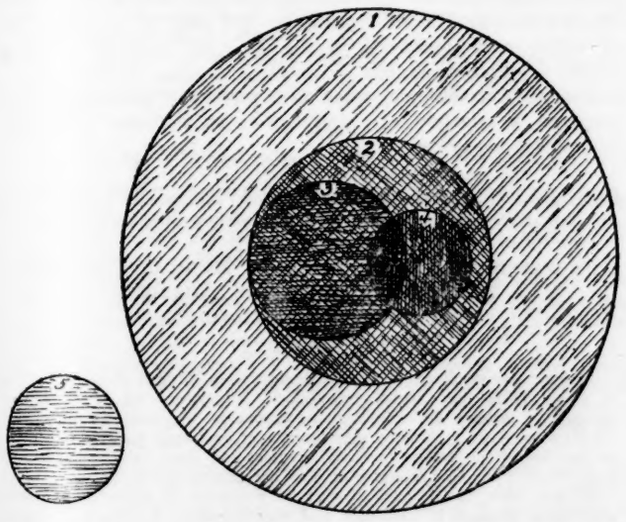

Fig. 1.—Grouped according to number.

This diagram is based on the number (not the capacity) of hospitals in each group.

1. The large circle (1) embraces all the 6,852 hospitals admitted to the American Medical Association Hospital Register.
2. Circle 2 embraces the 1,559 hospitals that are approved by the American College of Surgeons unconditionally.
3. Circle 3 represents the 613 hospitals that are approved for intern training by the Council on Medical Education and Hospitals of the American Medical Association.
4. Circle 4 represents the 294 hospitals that are approved for residencies in specialties by the Council on Medical Education and Hospitals of the American Medical Association.
5. The small circle (5) at the left represents the 458 institutions that are not admitted to the A. M. A. Hospital Register.

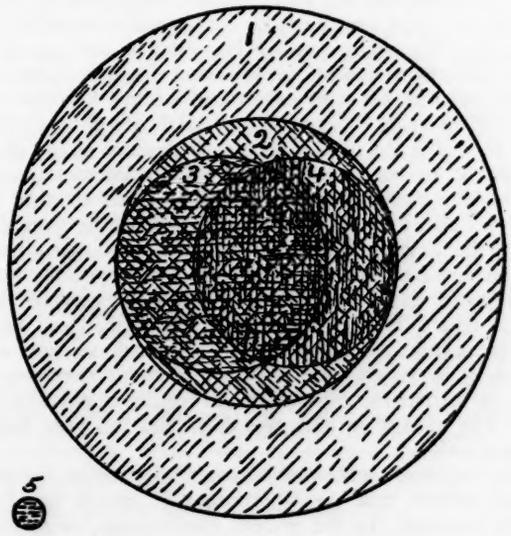

Fig. 2.—Grouped according to capacity.

This diagram is based on the total capacity, both beds and bassinets, of all hospitals in each group.

1. The large circle (1) represents the total capacity, 936,247, of all hospitals admitted to the American Medical Association Hospital Register.
2. Circle 2 represents the total capacity, 318,710, of all hospitals that are approved by the American College of Surgeons unconditionally.
3. Circle 3 represents the total capacity, 178,654, of all hospitals that are approved for intern training by the Council on Medical Education and Hospitals of the American Medical Association.
4. Circle 4 represents the total capacity, 179,591, of all hospitals that are approved for residencies in specialties by the Council on Medical Education and Hospitals.
5. The small circle (5) at the left represents the total capacity, 12,754, of all the institutions that are not admitted to the A. M. A. Hospital Register.

CLASSIFICATION OF HOSPITALS

It will be put into effect in the fall of 1930 at Duke University School of Medicine, Durham, N. C., and is also being contemplated by Tulane University School of Medicine, New Orleans, and the University of Tennessee School of Medicine at Memphis.

II. HOSPITALS

(*a*) *The Hospital Register.*—Since a year ago the number of hospitals considered worthy of inclusion in the Hospital Register has increased from 6,807 to 6,852, a net increase of forty-five. While 103 hospitals were added to the Register including ninety-seven new hospitals, fifty-three others, after careful investigation, were deemed unworthy of such recognition and were withheld or removed from the Register.

There are now also 458 hospitals on the nonregistered list as compared with 462 in 1918. These 458 institutions have a

total bed capacity of only 12,754, slightly more than 1 per cent. In the two charts, these unregistered hospitals loom comparatively large from the standpoint of numbers, but are less significant when their small capacity is considered. The 6,852 registered hospitals have a total bed capacity of 936,247, an increase of 40,968 since a year ago.

The average number of beds occupied in all types of hospitals was 78.7 per cent; the average number of hospital days for patients in general hospitals is estimated as fourteen, but in hospitals for tuberculosis and nervous and mental diseases the patients remain in the hospital for a longer period. An estimate, which is believed to be reasonably accurate, indicates that in general hospitals a total of 13,500,000 patients were cared for during 1928, and that in hospitals for tuberculosis and nervous and mental diseases approximately 765,000 patients are cared for, making a total of approximately 14,265,000 patients who were cared for in all hospitals during 1928.

(*b*) *Inspection of Hospitals.*—Beginning in the latter part of 1928, an inspection of hospitals was begun by inspectors sent out from the Council's headquarters, these inspections, at present, being limited to the hospitals approved for intern training and other hospitals which have applied for admission to that list. The inspections are being made state by state, and by July 1, 1929, most if not all of these hospitals will have been visited. In this way the first complete inspection of all intern hospitals will have been made by the Council's immediate representatives. The purpose of the inspection is not only to learn at first hand the equipment, facilities and efficiency of the routine in each hospital but also to inform frankly the officers and staff of the hospital of any changes which are deemed essential, in the hope that the institution can be retained on, or promptly restored to, the list of those approved for intern training.

As in 1915 there were not enough hospitals wanting interns to provide places for all students then graduating from medical schools, the Council necessarily included on its list all institutions seeking interns. Since that time, however, the hospitals have been increased in both number and bed capacity, so that there is now a larger demand for interns than can be filled. This, meanwhile, does not mean that enough students are not graduating to supply medical service for the increasing population, as the number of students graduating is increasing every year. The number in 1928 was 4,262 and this year there will be about 4,450.

With the large number of hospitals now seeking interns, the Council believes that the requirement of certain qualifications is fully justified. In the present investigation, therefore, it is expected that certain hospitals will be found which are not qualified for approval. As a result of this completed tour of investigation, therefore, the hospitals remaining on the approved list, with greater certainty, will be qualified to furnish excellent training for their interns. At present the 624 hospitals approved for internships have a total capacity of 178,654 beds and provide internships for 5,409 graduates.

(*c*) *Hospital Statistics.*—The Hospital Number of THE JOURNAL, published March 30, 1929, under the direct supervision of the Council, continues to give information which cannot be furnished through any other source. Without the information so published, the improvements recently made could not have been brought about.

THE HOSPITAL STAFF CONFERENCE

The hospital staff conference, if properly conducted, is the occasion when the hospital staff takes stock regarding the favorable or unfavorable results of its work. On this occasion also the staff becomes a board of strategy in the hospital's warfare against disease. In some hospitals these conferences are held daily, usually at lunch time, and reports are regularly presented regarding all so-called danger-line cases, and every such patient, whether rich or poor, is given the benefit of a daily consultation of the hospital staff members in the effort to save lives. This routine is of greater value in the training of interns and staff members than the holding of autopsies after the patients have died. The hospital staff conference, therefore, is certainly the most important procedure carried on in the institution.

COUNTY MEDICAL SOCIETY MEETINGS

Numerous reports in the Council's files show that members of certain state advisory committees on hospitals, for many years, have repeatedly urged that hospital conferences be restricted to the actual study of the hospital's own highly important problems, and that so-called scientific programs be left to the county medical societies. At its last business meeting the Council ordered that a special investigation be made concerning conflicts between hospital conferences and county society meetings. A letter of inquiry has been sent to the secretary of every county medical society seeking information bearing on their relations with local hospitals. It is hoped that as a result of this investigation the best interests of both the hospital and the medical society will be conserved.

LABORATORIES OF RADIOLOGY

After receiving instructions from the House of Delegates last year regarding laboratories of radiology, the Council promptly appointed a special committee of seven experts in radiology[1] to study the problems connected with such laboratories and to prepare a schedule of essentials on the basis of which a list of approved radiologic laboratories could be prepared.

At the Council's conference at the Palmer House, Chicago, last February, a half day was devoted entirely to this subject. Three papers were presented, respectively, by Drs. Chamberlain, Desjardins and Martin, bearing on the field of radiology, all of which were published in the Hospital Number of THE JOURNAL—that of March 30, 1929.

The same committee, after this prolonged preparation, has prepared a schedule of essentials of an approved radiologic laboratory, as follows:

ESSENTIALS OF AN APPROVED DEPARTMENT OF RADIOLOGY OR ROENTGENOLOGY

PREPARED BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS OF THE AMERICAN MEDICAL ASSOCIATION

INTRODUCTION

At the Minneapolis Session of the American Medical Association, held in June, 1928, the Council on Medical Education and Hospitals was directed to extend its activities in regard to the approval of clinical laboratories so as to include departments of radiology and roentgenology, as this branch of medical activity occupies the same relative position in medical practice and procedure as does the clinical laboratory.

In this work the Council desires to cooperate in every way possible with those engaged in radiology and roentgenology, for the improvement of this type of service. The Council does not claim to have, nor does it assume, any legal authority over such departments, but it recognizes clearly that the officers of such institutions have the unquestioned right to conduct their work in the way they deem wise. If the department of radiology, or a physician specializing in this field, desires to have the Council's approval, however, it or he should not be unwilling to comply with the principles which the Council deems necessary for such endorsement. These "Essentials" have been prepared by the Council, therefore, with the sole intention and desire of dealing with equal fairness with all such departments.

1. DEFINITIONS

Radiology.—The branch of medicine which deals with the diagnostic and therapeutic application of radiant energy, including roentgen rays, radium, ultraviolet rays and other spectral radiation.

Department of Radiology.—The department of a hospital, clinic or other institution, organized and equipped for the diagnostic and therapeutic application of radiant energy, including roentgen rays, radium, ultraviolet rays and other spectral radiations.

Radiologist.—A qualified physician who also has obtained adequate special training and experience in general radiology.

Roentgenology.—The phase of radiology which deals with the diagnostic and therapeutic application of roentgen rays only.

Department of Roentgenology.—The department of a hospital, clinic or other institution organized and equipped for the diagnostic and therapeutic application of roentgen rays only. A department organized and equipped solely for the diagnostic or therapeutic application of roentgen rays shall be known as a department of diagnostic or of therapeutic roentgenology, respectively.

1. The members of this committee are Dr. A. U. Desjardins, Mayo Clinic, Rochester, Minn., *chairman;* Dr. William E. Chamberlain, Stanford University Hospital, San Francisco; Dr. George Grier, Jenkins Arcade Building, Pittsburgh; Dr. Frederick M. Hodges, 1000 West Franklin Street, Richmond, Va.; Dr. Charles L. Martin, Baylor Hospital, Dallas, Texas; Dr. Ralph Pemberton, 2120 Sansom Street, Philadelphia, and Dr. D. B. Phemister, Department of Surgery, University of Chicago.

Roentgenologist.—A qualified physician who has had adequate training and experience in the diagnostic and therapeutic application of roentgen rays.

Diagnostic Roentgenologist.—A roentgenologist who limits his practice to the diagnostic phase of roentgenology.

Therapeutic Roentgenologist.—A roentgenologist who limits his practice to the therapeutic phase of roentgenology.

Radium Specialist.—A radiologist who specializes in the therapeutic use of radium.

Private Radiologic Laboratories.—The principles herein which refer to a hospital department of radiology should be construed as applying with equal force to a private laboratory of radiology.

2. Personnel

(*a*) *Director.*—The director shall be a graduate of a medical school that is approved by the Council on Medical Education and Hospitals and shall be licensed to practice medicine in the state in which his department is located. He shall also have had special training, such as is approved by the Council, in radiology or roentgenology at an acceptable school—preceptorship, hospital or clinic, department of radiology or roentgenology—for a period of at least three years, or, in lieu of such training, shall have had a minimum of five years' experience in the exclusive practice of radiology or roentgenology. He must be a man of good standing in the medical profession, and particularly among those specializing in radiology. The director shall either be on a full-time basis or have definite hours of attendance at the department, such hours to be ample to insure the element of medical consultation in every examination or treatment.

The director shall have complete charge of the department, with responsibility for all examinations and treatments. He shall also be responsible for the employment of all professional assistants, and for the efficient maintenance of the department.

(*b*) *Assistants.*—The director may have a corps of qualified medical and technical assistants responsible to him, and for whom he is responsible, to carry out accurately the various functions of the department.

3. Scope

A department of radiology should be able to render all of the following services:

(*a*) Roentgenography, simple or stereoscopic, of any part of the body, with medical interpretation of the roentgenographic observations, and under satisfactory conditions for the protection of the patient and of the professional and technical personnel.

(*b*) Roentgenoscopy of any part of the body, in any position, with or without opaque mediums, with medical interpretation of the roentgenoscopic observations, and under satisfactory conditions for the protection of the patient and the professional and technical personnel.

(*c*) Roentgenotherapy of all benign and malignant diseases amenable to such treatment with roentgen rays generated at low, moderate or high voltage (long, medium or short wavelength), as the conditions may require, and under satisfactory conditions for the protection of the patient and of the professional and technical personnel.

(*d*) Radium therapy of all benign and malignant diseases amenable to such treatment with an adequate quantity of radium element or emanation, and under satisfactory conditions for the protection of the patient and of the professional and technical personnel.

Ultraviolet therapy, general or local, with satisfactory air-cooled and water-cooled quartz mercury lamps or carbon arc lamps, with suitable quartz and other applicators for irradiation of cavities, sinuses, or the superficial lesions under pressure, and under satisfactory conditions for the protection of the patient and of the professional or technical personnel. This stipulation is not mandatory, but the Council recommends that every department of radiology be equipped for ultraviolet therapy or that the ultraviolet equipment of hospitals be placed in the department of radiology. Ultraviolet treatment by the department of physical therapy shall not be countenanced unless such department is under the control and supervision of a medical director who has specialized in radiology.

A department of roentgenology should be able to render the services specified under *a*, *b* and *c*.

A department of diagnostic roentgenology should be able to render the services specified under *a* and *b*.

A department of therapeutic roentgenology should be able to render the services specified under *c*.

A department of radium therapy should be able to render the services specified in *d*.

4. Housing

The housing should be adequate for the proper functioning of the department of radiology or roentgenology. Damp or ill ventilated quarters are unsuitable for such work.

5. Equipment

The equipment should be sufficient to carry out properly the technical procedures and activities of the department of radiology or roentgenology.

6. Protection

The arrangement of working rooms and conditions, and the construction of all apparatus shall be such as to provide adequate protection, both from electrical shock and from avoidable exposure to roentgen rays or radium, to patients, attendants and other persons in or near the department. The requirements in this respect are based on the recommendations adopted by the International Congress of Radiology, held at Stockholm, Sweden, in July, 1928, and approved by the American Roentgen Ray Society and the Radiological Society of North America.

7. Records

Full records of all examinations and treatments made by the department, suitably indexed, are essential. Roentgenograms made in the department should have inerasible identification marks which will preclude error as to patients concerned. Roentgenograms may be lent to referring physicians but should be returned to the laboratory for filing and future reference. Suitable storage facilities should be provided where roentgenograms and other records will be both safe and readily available for reference. They shall be kept as long as there is the possibility of their being needed for the benefit of the patients or their physicians.

As roentgenography constitutes only a kind of medical examination, on which the roentgenologist's opinion of the patient's condition is partly or wholly based, and as the opinion of the specialist is the essential factor, the Council holds that the introduction of roentgenograms as evidence in medicolegal cases should be discouraged as immaterial and as tending to adulterate the process of justice. There is no more reason for the introduction of roentgenograms than for requiring a pathologist to bring to court his microscope and his sections of tissues.

8. Reports

The reports of an approved department of radiology or roentgenology shall be made through the director on stationery or blanks having the name of the director printed thereon. Under no circumstances shall roentgenologic diagnoses, interpretations, opinions, statements of prognosis, or therapeutic suggestions be offered by the nonmedical personnel.

9. Library

The department of radiology and roentgenology should be provided with, or have convenient access to, a library including current scientific books and journals on all the various subjects required in its work.

10. Ethics, Fees and Publicity

Radiology is a special type of medical practice, and the physician practicing radiology is subject to the same rules of special training and conduct that govern his fellow specialists in the practice of medicine and surgery. The Principles of Medical Ethics of the American Medical Association shall apply in all cases. The fees charged for radiologic services shall be under the control of the director of the department. All systems of rebates, discounts, special group rates, etc., shall be considered unethical, except that, where the patient's economic status is the determining factor, the radiologist, like his fellow physician in medicine or surgery, may waive part or all of the fee.

The publicity of an approved department of radiology or roentgenology should be in professional good taste and limited to statements of fact as to name, address and telephone number; names and titles of the director and other active responsible personnel; field of work covered, office hours, directions for referring patients, and so forth. It should not contain misleading statements or claims of unusual superiority. It should not advocate medical fads nor lay undue stress on the importance of roentgenologic observations. On the letter heads or any other form of publicity, only the names of those rendering regular services to the department should appear as being connected with the department. Advertising matter should be directed only to physicians, either through bulletins or through recognized technical journals, and never to the nonprofessional public, as, for example, by announcements in popular journals and periodicals, circulars, pamphlets or telephone lists.

11. Admission to the Approved List

Only those departments of radiology or roentgenology in which the personnel, space, equipment, management, finances and records are such as will insure honest, efficient and accurate work may expect to be listed as approved. Any department of radiology or roentgenology desiring to be placed on the approved list should apply to the Council on Medical Education and Hospitals of the American Medical Association, 535 North Dearborn Street, Chicago.

This schedule has been revised in accordance with suggestions received from the various members of the Council. In its preparation the Council has had the benefit of opinions and suggestions expressed by fifty or more individuals including many who are prominent in the field of radiology. Following its adoption, the Council will proceed to establish a list of approved radiologic laboratories in the same manner as it has developed its list of approved clinical laboratories.

Summary

Medical Education

1. There are seventy-four medical schools in the United States, of which seventy-two are fully acceptable and two still remain in class B. A new school has just been opened, the development of which is still incomplete and its classification uncertain.

2. Six institutions have always been rated low in class C and are now considered by the Council as unworthy of being recognized as medical schools.

3. New medical school buildings and teaching hospitals have been erected in about fifty medical schools during the last two decades. In the last ten years such improvements, to a remark-

able extent, have included the building or reconstruction of entire teaching plants whereby medical buildings, laboratories and hospitals have been placed in immediate proximity.

4. Even with the exclusion of six unrecognized colleges, the enrolment of students still shows an increase over last year; the number now enrolled is estimated at 20,796, as compared with 20,546 last year.

5. Careful investigation shows that students now failing to secure enrolment in acceptable medical schools are deficient either quantitatively or qualitatively. A fair proportion of the former, by continuing their premedical education, are later being accepted. On the average, each student applied to two or more medical schools and some made application to as many as forty different schools.

6. Formerly medical schools varied so largely in their standards and methods of admission that few students were so poorly qualified that they could not gain admission somewhere. Now the entrance requirements of all class A schools are administered in a fairly uniform manner whereby the unqualified naturally and properly are refused admission. On the other hand, medical schools are gradually making provision for increased enrolments whereby, it is believed, most, if not all, of the properly qualified students are gaining admission.

7. Five medical schools now provide continuous sessions whereby the four essential college years can be completed in three calendar years by making use of the heretofore overlong summer vacations. This continuous plan is now being considered also by three other medical schools.

HOSPITALS

8. Institutions admitted to the hospital register have increased from 6,807 to 6,852, a net increase of forty-five. Although ninety-seven new hospitals have been registered and six others restored, fifty-three others have been found unworthy of such registration. The total bed capacity of registered hospitals is now 936,247, an increase of 40,968 beds over last year.

9. Hospitals deemed unworthy of registration numbered 458 but included a bed capacity of 12,754, or only 1.2 per cent of all hospital beds.

10. An estimate shows that of all hospital beds 78.7 per cent are occupied. On this basis an estimate shows that about 14,265,000 patients were cared for in all hospitals during 1928.

11. An inspection of all hospitals considered eligible to train interns is now being made by members of the Council's immediate staff. This insures greater uniformity of methods and a more equal consideration for all hospitals. It also assures a higher degree of efficiency in hospitals approved for interns.

12. Properly conducted hospital staff conferences are now considered essential to greater efficiency of hospital work. Such conferences waste time unless devoted to the hospital's own patients and problems. It is suggested that outside speakers and special programs be left to medical society meetings.

13. Such conflicts as now occur between medical society meetings and hospital staff conferences can be readjusted to the mutual benefit of medical societies and of hospitals.

14. The Council presents for consideration and approval a schedule of essentials as a basis for the supervision of laboratories of radiology and roentgenology. This has been prepared after a careful and extensive study under the direction of the Council aided by a special committee of experts in the field of radiology. Following the adoption and approval of this schedule by your honorable body, the investigation of such institutions can be pressed and a list established of those which are found worthy of approval.

Respectfully submitted.

COUNCIL ON MEDICAL EDUCATION AND HOSPITALS.

RAY LYMAN WILBUR, Chairman.
WALTER F. DONALDSON.
REGINALD FITZ.
MERRITTE W. IRELAND.
EMMETT P. NORTH.
JAMES S. McLESTER.
LOUIS B. WILSON.
N. P. COLWELL, Secretary.

REPORT OF THE COUNCIL ON SCIENTIFIC ASSEMBLY

To the Members of the House of Delegates of the American Medical Association:

The usual meetings of the Council on Scientific Assembly and the regular Annual Conference of Section Secretaries with the Council have been held since the last annual session.

ASSIGNMENTS FOR SECTION MEETINGS AT PORTLAND SESSION

The meeting hours of the sections at the Eightieth Annual Session have been assigned as follows:

MORNING	AFTERNOON
Practice of Medicine	Diseases of Children
Obstetrics, Gynecology and Abdominal Surgery	Surgery, General and Abdominal
Laryngology, Otology and Rhinology	Ophthalmology
Pathology and Physiology	Pharmacology and Therapeutics
Orthopedic Surgery	Nervous and Mental Diseases
Urology	Dermatology and Syphilology
Preventive and Industrial Medicine and Public Health	Gastro-Enterology and Proctology
Radiology	

DIAGNOSTIC CLINICS AND CLINICAL LECTURES

The program of clinics and lectures at Minneapolis attracted such large attendance and elicited so much favorable comment that the Council, with the assistance of the Local Committee of Arrangements, has arranged for a similar program at this session.

COMMITTEE TO STUDY ANESTHESIA ACCIDENTS

With the approval and cooperation of the Board of Trustees, a committee has been appointed to study accidents occurring in connection with the use and handling of anesthetics in the hope that information concerning the causes and prevention of such accidents may be secured and made available to the profession.

The personnel of the committee is as follows: Yandell Henderson, New Haven, Conn., chairman; H. B. Williams, New York; John S. Lundy, Rochester, Minn.; H. Gideon Wells, Chicago; W. J. Merle Scott, Rochester, N. Y.

SECTION PROGRAMS

The officers of the sections have been zealous and active in their efforts to provide a good program for the current session. The Council would commend their good work, especially that of the secretaries on whom the burden is most heavily imposed.

DEATH OF BRYCE W. FONTAINE

Bryce W. Fontaine, secretary of the Section on Practice of Medicine for the last four years, died at his home in Memphis, March 31, 1929. Dr. Fontaine's service to his section and to the American Medical Association was marked by the same high order of devotion to duty, loyalty and efficiency that distinguished his effort in the practice of medicine and in the full discharge of his every obligation as an official, a citizen and a physician.

Respectfully submitted.

J. SHELTON HORSLEY, Chairman.
F. P. GENGENBACH.
JOHN E. LANE.
FRANK H. LAHEY.
ROGER S. MORRIS.
MALCOLM L. HARRIS, President-Elect.
MORRIS FISHBEIN, Editor, THE JOURNAL.
OLIN WEST, Secretary.
} Ex officio.

The Lay Public and Physicians.—There is an unwarrantable and unjustifiable suspicion on the part of the lay public that doctors are not to be trusted unless there is a lay element in their councils. Unfortunately this attitude is often tacitly accepted by members of our own profession. The sooner we refuse to tolerate it any longer, the better for our honor and self-respect.—Shanley, J. P.: The State and Medicine, *Irish J. M. Sc.*, May, 1929.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION

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SATURDAY, JUNE 1, 1929

THE NUTRITION OF THE FETUS

The placenta is an organ of remarkable architectural arrangement in that, as Slemons [1] has expressed it, the structure accommodates simultaneously the fetal and the maternal circulations, yet holds them apart. Since the days of the Hunters it has been known that the mother's blood never enters the fetus and also that the reverse phenomenon is impossible. As pregnancy is essentially a problem in nutrition under conditions in which the dominant metabolic forces are those favoring growth, the question as to how the nutrient substances are conveyed to the fetus has aroused much speculation. How do they pass the apparent placental barrier? In the main, two antagonistic theories have been developed; one of these, the vitalistic, assumes that the wall of the chorionic villus takes an active part in the placental interchange; the other, the mechanistic, regards this wall as a passive, semipermeable membrane conforming with the laws of osmosis and diffusion. Through examination of specimens of maternal and fetal blood secured simultaneously just after the infant was born, Slemons and his co-workers, in particular, have secured data that leave little doubt of the ready passage of soluble substances such as amino-acids and sugar to the fetus, whereas less soluble nutrients, such as fats, fail to pass. One must assume that fat is not included among the materials contributed by the parent to her offspring. The fat of the body of the fetus is manufactured there, almost certainly manufactured from carbohydrate with which the new organism is supplied abundantly.

It has apparently become established, furthermore, that the human placenta, unlike that of some other species, is uniformly permeable to such large molecules as the protein-sensitizing bodies, antitoxins, agglutinins, precipitins and bacteriolysins.[2] The occasional reports of inequalities in the concentrations of metabolites in the maternal and fetal bloods has raised the inquiry of the existence of some more recondite mechanism than mere diffusion in the exchange of materials leading to fetal growth. Luck and Engle [3] have attempted to supplement the knowledge of placental permeability by analyses of the whole fetus and maternal liver and muscle. By so doing they have been able to increase at will the concentrations of the selected metabolites in the maternal organism and to determine the changes, if any, in the concentrations within the fetus. By examination of animals in series at different times after injection of the experimental substances it has been possible, moreover, to study the time relationships involved and hence to ascertain the rates of placental response. Thus, after the amino-acids glycine and alanine had been administered subcutaneously to pregnant rats, the rates of increase in the amino-nitrogen content of the maternal muscle and the whole fetus were similar.

It appears anew that the placenta is quite permeable to the nutrient amino-acids. Furthermore, the mechanism by which the maternal muscle absorbs amino-acids from the maternal plasma is apparently the same as that by which the fetus absorbs amino-acids from the fetal plasma. Thus, again, the need of a vitalistic hypothesis for explaining placental nutrition is fully discounted.

1. Slemons, J. M.: The Nutrition of the Fetus, New Haven, Yale University Press, 1919.
2. Ratner, Bret; Jackson, H. C., and Gruehl, H. L.: J. Immunol. **14**: 249 (Nov.) 1927.
3. Luck, J. M., and Engle, E. T.: The Permeability of the Placenta of the Rat to Glycine, Alanine and Urea, Am. J. Physiol. **88**: 230 (March) 1929.

THALLIUM POISONING

Three children died recently in London from thallium compounds administered for ringworm of the scalp. This tragedy was caused by the druggist making a mistake in converting metric to apothecary's measure whereby the children received more than five times the quantity of thallium acetate ordered. In the report of these deaths the statement is made [4] that prescription writing in America is almost universally in the metric system. Unfortunately, this is not the case. Probably in not more than 10 or 15 per cent of prescriptions written in the United States is the decimal system employed. Irrespective of this misconception of the lamentable nature of the deaths and of the forceful argument they furnish for general adoption of the metric system by physicians and druggists, the report has another somber significance: it is an additional indication of the growing importance of thallium compounds as a dangerous poison.

The first therapeutic use of thallium preparations was to check sweating. Its action in causing a loosening and falling out of the hair was a "by-product," and most of our information about its other and more general poisonous effects in man has been obtained from its employment in epilation. In countries such as Mexico and Russia, where ringworm is prevalent, reports by some dermatologists on the use of thallium preparations have dealt with hundreds of children

4. Poisoning by Thallium Acetate, Brit. M. J. **1**: 712 (April 13) 1929.

successfully treated.[5] This has been accomplished by adjusting the dosage to the weight of the naked child and by using it only when the age-weight ratio is within normal limits, excluding it in children undergoing pubertal changes or endocrine dysfunction and administering only fresh reliable preparations in a single dose of from 4 to 8 mg. per kilogram by mouth.

There are many references to the toxic action of thallium preparations in dermatologic literature. The metal is closely related chemically to mercury and lead. Although they appear earlier, the symptoms of chronic thallium poisoning are more like those produced by arsenic than by these other metals. There is tenderness of large nerve trunks, especially those to the lower extremities, neuralgic pains with electrical reactions of nerve degeneration, and disturbances of sensation. Swollen, hot and tender lower extremities and effusion into one knee joint were observed by Davies and Andrews.[6] Headaches, insomnia, paleness, loss of weight,[7] lacrimation, salivation and deafness,[8] also psychic disturbances,[9] choreiform movements, dermatitis and even fever [10] have been reported; also achylia, abdominal colic, diarrhea and transitory albuminuria and glycosuria; a lymphocytosis and eosinophilia are quite constant; sexual activity is lessened and menstruation ceases.

That many of the effects of thallium preparations are due to action on sympathetic nerves and their ganglions is supported by numerous studies on the lower animals and apparently is definitely established. The functional and structural disturbances that may arise in glands of internal secretions from thallium poisoning are being actively investigated. Meanwhile additional valuable information concerning its toxicology will be forthcoming from the discovery that it is a menace in certain industries [11] and because it recently has become the potent base in a rat poison used in Europe, where a number of deaths or severe poisonings have been reported, some accidental, others suicidal and one homicidal. The last was a subacute poisoning in Vienna continuing about three months, carefully studied clinically [12] and ending in death, with the postmortem examination by Haberda.[13] Poisoning was suspected during life but its nature was learned only after the patient had died and it was learned what had been used. Thallium was then found by a second chemical examination. Presumably the chemical investigation to learn what poison killed two and made five others in a family severely ill, as reported by Althoff,[14] also failed to include a search for thallium. Only small traces of zinc were found; all the survivors lost their hair. There is a certain amount of vogue in poisons, as is well known. Whether or not thallium preparations become fashionable or remain unusual, they should not be overlooked in toxicologic examinations.

5. Two thousand five hundred by Dostrowsky in Jerusalem (Dermat. Wchnschr. **84**: 729 [May 28] 1927).

6. Davies, J. H. T., and Andrews, M. C.: A Case of Thallium Poisoning, Brit. M. J. **2**: 1139 (Dec. 17) 1927.

7. Divella, M.: Gior. ital. d. dermat. e. sif. **67**: 291, 1926.

8. Grshebin, S. N., and Salzmann, G. G.: Essigsaures Thallium als Epilationsmittel bei Behandlung der Dermatomykosen, Dermat. Ztschr. **52**: 105 (March) 1928.

9. Ritter, H., and Karrenberg, C. L.: Ein kasuistischer Beitrag zur Frage der Thallium Epilation, Dermat. Wchnschr. **86**: 434 (March) 1928.

10. Divella (footnote 4). Peter, G.: Epilation mit Thallium acetic oxydulat, Arch. f. Dermat. u. Syph. **150**: 438, 1926.

11. Buschke, A., and Langer, E.: Die forensische und gewerbhygiensche Bedeutung des Thalliums, München. med. Wchnschr. **74**: 1494 (Sept. 2) 1927. Rube and Hendricks: Ueber gewerbliche Thalliumvergiftung, Med. Welt. **1**: 733, 1927. Teleky, L.: Gerwerbliche Thalliumvergiftung, Wien. med. Wchnschr. **78**: 506 (April 14) 1928.

12. Kaps, L.: Kriminelle tödliche subakute Thalliumvergiftung, Wien. klin. Wchnschr. **40**: 967 (July 28) 1927.

13. Haberda, A.: Giftmord durch Thallium, Beitr. z. gerichtl. Med. **7**: 1, 1928.

HEPATIC ACTIVITY

Experience has shown that the conclusions reached with succeeding investigations in the field of intermediary metabolism tend to change somewhat, depending on advances in technic or on the use of new reagents. However, a survey of the data emphasizes the fact that the liver is the organ primarily involved in bringing about those changes in the available food materials whereby these serve in the production of energy, in building new tissue, and in the synthesis of body hormones. The liver is indispensable not only for the temporary storage of carbohydrate in the form of glycogen but also for the transformation into blood sugar of any potentially dextrose-forming substance such as lactic acid and certain amino-acids. The oxidation of fatty acids in the organism is currently believed to be preceded by an increase in the degree of unsaturation of the carbon atoms, a change attributed to the activity of the hepatic cells. The liver is the most important if not the only locus of chemical action in the body by which the nitrogen is removed from the amino-acids and urea formed from it. In addition to its inherent adaptability for the transformation of food materials, the liver is anatomically well located for the work it does. The drainage of the vast splanchnic area with all the absorbed materials, both desirable and toxic, passes first to the liver through the portal vein.

The detoxication of absorbed materials is another of the hepatic functions of great importance to the organism, and chemical reactions of considerable variety take place in connection with this activity. Thus, glucuronic acid from sugar, sulphuric acid and certain amino-acids are conjugated with toxic substances, which are then excreted in an innocuous form. Not only does this occur with foreign compounds, but apparently a similar type of change is brought about in the liver on certain substances which normally are found in other parts of the body. It has been shown [15] that, whereas secretin injected into the femoral artery or vein stimulates the pancreas to secrete in from fifty to sixty seconds, the same dose given by way of the portal vein produces no effect until from three to five minutes has elapsed

14. Althoff: Sieben Fälle von Thalliumvergiftung in einer Familie, Deutsche. Ztschr. f. d. ges. gerichtl. Med. **11**: 478 (July) 1928.

15. Cowgill, G. R., and Deuel, H. J., Jr.: Am. J. Physiol. **69**: 568 (Aug.) 1924.

and then the response is much less pronounced than before. It is generally accepted that the secretin mechanism is the normal mode of stimulating the secretion of pancreatic juice in the body, yet it appears that, when this hormone is sent directly to the liver, it is treated more or less as a foreign substance by that organ. That insulin exhibits an atypical behavior when injected into the portal vein is shown by the recent studies of Collens and Murlin.[16] They injected the same dose of insulin first into the jugular vein and later into the portal vein. The conventional drop in blood sugar concentration was observed with the injection into the jugular, whereas insulin in the portal vein produced a marked though relatively transient rise in the amount of blood sugar. The difference in behavior is unmistakable and is consistent in all cases studied. It appears to depend solely on the difference in path of administration of the hormone.

The implications of the experimental results cited are far reaching. Not only do they emphasize the indispensability of the liver but they also throw light on the relationship of insulin to carbohydrate metabolism. That the increase in blood sugar brought about by insulin through the portal vein arises from the hydrolysis of glycogen in the liver seems to be the most tenable explanation and one that can be reconciled with the lack of glycogen formation in insulinized normal animals.[17] These recent studies point out the necessity of taking into consideration the path of administration of a substance when interpreting the results of its action in physiologic investigations.

CAROTIN AND VITAMIN A

The procedure by which man learns and makes knowledge his own can be divided into three steps—impression, assimilation and expression. In the biologic sciences a thorough understanding of facts and processes is acquired in much the same manner. For instance, it is discovered that a relatively crude plant or animal extract possesses certain pharmacologic properties. Further study reveals that this substance has definite therapeutic value. Then follow purification and analysis. The final effort of the biochemist is bent toward the ideal of expression; namely, the synthesis of the compound. Such a sequence of events has repeatedly occurred in connection with many of the compounds commonly used in medicine. The reason for the purification, analysis and synthesis are obvious. Unless the composition is known, the mode of action in the organism cannot be accurately elucidated; nor are improvements likely. The synthesis of a substance almost always results in greater production and in lessened cost. Epinephrine, methyl salicylate and thyroxin are some of the many therapeutic agents that have been developed along the path outlined. Attempts to isolate and to identify the vitamins have thus far been largely fruitless, though relationships of considerable interest and of possible significance have been discovered, especially in connection with vitamin A.

Because of its comparative richness in the fat soluble vitamins, cod liver oil is the raw material with which almost all the studies of this nature have begun. It was early found that vitamin A resists the action of strong alkalis. Furthermore, after saponification of the fats present, the vitamin potency is found in the part resistant to the hydrolysis. This active fraction contains the cholesterol. When the cholesterol is removed, the vitamin A is left behind. Further purification by laboratory manipulation has resulted in a fraction representing less than 0.1 per cent of the original cod liver oil and so potent that between 0.05 and 0.005 mg. a day provides enough vitamin A for good growth in a rat subsisting on a ration otherwise adequate. In spite of its great potency it is extremely doubtful whether this fraction of cod liver oil represents a pure chemical compound or, in other words, vitamin A. The technical difficulties involved in more sharply separating the fractions have prevented further immediate progress in this direction. However, significant observations have been made along other lines.

The earlier investigations of vitamin A were directed toward the elucidation of its distribution. As the data accumulated, a correlation was repeatedly noted between the presence of this factor and the natural yellow pigment, whether the material under consideration consisted of plant leaves, stems, fruits and tubers or animal tissues and fluids. Squash, sweet potatoes and yellow corn contain vitamin A, while white potatoes, sugar beets and white corn are devoid of it. On the other hand, there have been cited definite exceptions to the rule. Carotin, the yellow color of fruits and green leaves, in crystalline form was reported by some investigators to stimulate growth in animals declining in weight on diets deficient in vitamin A, while negative results with carotin were obtained by others. The general impression has been that, although closely associated with the yellow pigment, vitamin A is not identical with it. The whole question has been reopened recently by Swedish investigators,[1] who report chemical and biologic studies with carotin. They believe that the earlier equivocal results were due to the lack of appreciation of the necessity for vitamin D in the experimental ration. Conducting their investigation with the most improved technic, they obtained growth with as little as 0.005 mg. of crystallized carotin in animals which had been depleted of vitamin A. Furthermore, this pigment gave the blue color with antimony trichloride, heretofore alleged to be specific for vitamin A. One gains the impression from the discussion that the investigators believe that carotin and the carotinoid pigments are responsible for the vitamin A

16. Collens, W. S., and Murlin, J. R.: Proc. Soc. Exper. Biol. & Med. **26**: 485, 1929.
17. Cori, C. F., and Cori, G. T.: J. Biol. Chem. **70**: 557 (Oct.) 1926.

1. Von Euler, B.; von Euler, H., and Hellstrom, H.: Biochem. Ztschr. **203**: 370, 1928.

potency of the various natural materials—butter, bone marrow, serum, yeast extract—used in the experiments.

It is doubtful whether these observations represent the final word on the chemical identity of vitamin A. On the other hand, they should stimulate further studies in this field. That even crystalline compounds can be contaminated with closely similar substances is now well known. It is possible that the various "pure" preparations of recognized vitamin A potency contain vanishingly small traces of what will eventually prove to be the effective material. Another point of interest, in view of the ubiquitous nature of the yellow pigments, is that carotin is a hydrocarbon and that from their most potent vitamin A fraction of cod liver oil Drummond, Channon and Coward [2] obtained a hydrocarbon similar to squalene found in shark liver oil. If the yellow pigments are ultimately found to be essential in the organism, it will be necessary to add the class of hydrocarbons to the small group of compounds known to be required for normal function.

2. Drummond, J. C.; Channon, H. J., and Coward, K. H.: Biochem. J. **19**: 1047, 1925.

Current Comment

AN INCREASE IN OUTBREAKS OF BOTULISM DUE TO HOME CANNED PRODUCTS

Occasional outbreaks of botulism continue to occur in various parts of our country. Public health authorities know the scientific measures that have been voluntarily adopted to control the commercial canning of food. The state department of public health of California regulates this industry by legislation and maintains an efficient canning inspection service. This inspection service has as advisers highly technical personnel from the staff of the George Williams Hooper Foundation for Medical Research of the University of California. In this manner, California approaches closely the ideal in securing safety in preserved foods. Home canning with its varied processing formulas, many of which are based on insufficient laboratory controls or on none whatever, as in the so-called cold pack process, continues to take its toll of lives in the United States. For some time data have been available as to the unsafe heating processes used in home canning, but apparently the responsibility for such processes is regarded lightly or the outbreaks, with their frightful mortality rates, are entirely ignored. Since November, 1928, eleven outbreaks have occurred in various parts of the United States from a variety of foods canned by the home canning methods. Some of the foods have never heretofore been involved. In these eleven outbreaks there were thirty-five cases with twenty-one deaths. Certainly the safety of heating processes adopted for the preservation of food should be assured by health agencies whether in the home or in the commercial cannery. The home canner of the so-called nonacid vegetables and meats should either use 10 per cent brine or never consume such products until they have been actively boiled for some time after removal from the glass jar. Moreover, the government must lead in changing existing formulas and in issuing adequate warning against insufficient heating processes now used in home canning. There is no valid excuse for continuance of such processes by departments of home economics in agricultural colleges, universities and their extension divisions.

THE SOURCE OF FIBRINOGEN

The control of hemorrhage depends at some stage on the proper coagulation of the blood. The foremost factor in this process is the transformation of the soluble circulating protein fibrinogen into the insoluble modification fibrin that represents the physical basis of the clot. Without available fibrinogen, the menace of bleeding would continually terrorize the physician. Sometimes, through untoward combinations of circumstances, small quantities of fibrin are actually formed intravascularly and furnish threatening possibilities of thrombosis that may tax the utmost ingenuity of the clinician. It has long been known that, when fibrinogen is lost from the body by extensive hemorrhage or perhaps destroyed by some morbid process within the organism, it can be regenerated with considerable ease. A few hours often suffice for the restoration of the fibrinogen in circulating blood that has experienced an extensive loss of this clot-yielding protein. There are abundant evidences that blood plasma fibrinogen is a labile substance that reacts to a multitude of stimuli within the body.[1] Thus acute inflammations are invariably associated with high values for the content of fibrinogen in the plasma, whereas the concentration is lowered in cases of liver injury. It seems strange that so little has been definitely known in the past regarding the actual site of origin of a substance that is physiologically so important as fibrinogen is. A few years ago indirect evidence was adduced that the protein in question is produced mainly in the liver, though it was further suggested that the intestinal tract may supply a certain amount of reserve fibrinogen in certain emergencies.[2] In 1922, Foster and Whipple [1] ventured the assertion that there may be certain reserves of fibrinogen or its parent substance held in certain body tissues other than the liver, but this reserve is probably not large. They concluded that all available data point to the liver as the only potential source of fibrinogen in the body. A final proof has awaited more crucial experiments, which have now been supplied by McMaster and Drury [3] at the Rockefeller Institute for Medical Research. They have succeeded in making observations on hepatectomized animals that have been partially depleted of their fibrinogen. The results prove that fibrinogen regeneration does not occur in the absence of liver. This explains why the only condition which without exception causes or is associated with low fibrin values is acute extensive liver injury by drugs. The uniformity of this reaction is of great significance, especially the parallelism demonstrable between the extent of the liver injury and the depression in fibrin values.

1. Foster, D. P., and Whipple, G. H.: Blood Fibrin Studies, Am. J. Physiol. **58**: 407 (Jan.) 1922.
2. Goodpasture: Am. J. Physiol. **33**:70, 1914. Whipple: Ibid. **33**: 50, 1914.
3. McMaster, P. D., and Drury, D. R.: The Source of Fibrinogen, Proc. Soc. Exper. Biol. & Med. **26**:490 (March) 1929.

Association News

MEDICAL BROADCAST FOR THE WEEK

The American Medical Association Morning Health Talks and Evening Health Hints from Hygeia

The American Medical Association broadcasts daily at 11:15 o'clock in the morning, central daylight saving time, over Station WBBM (770 kilocycles, or 389.4 meters).

The program for the week of June 3-8, will be as follows:

June 3. "Choosing A Physician," by Dr. John M. Dodson.
June 4. "Bless You My Children," by Dr. John M. Dodson.
June 5. "Medical News," by Dr. J. F. Hammond.
June 6. "I'm Not to Blame," by Dr. R. G. Leland.
June 7. "One May Get or Avoid Typhoid," by Dr. R. G. Leland.
June 8. "Poverty and Crime," by Dr. R. G. Leland.

Evening Health Hints from Hygeia at 8 o'Clock, Central Daylight Saving Time

June 3. "Caring for Baby in Hot Weather."
June 4. "Caring for Baby in Hot Weather" (continued).
June 5. "If You Would Possess a Clear Skin."
June 6. "The Age of the Cave Man."
June 7. "Benzol Declared to be Industrial Hazard."
June 8. "Vaccination."

Medical News

(PHYSICIANS WILL CONFER A FAVOR BY SENDING FOR THIS DEPARTMENT ITEMS OF NEWS OF MORE OR LESS GENERAL INTEREST: SUCH AS RELATE TO SOCIETY ACTIVITIES, NEW HOSPITALS, EDUCATION, PUBLIC HEALTH, ETC.)

ARKANSAS

Society News.—Col. George A. Skinner, U. S. Army Medical Corps, was guest of honor at the annual banquet of the Garland County-Hot Springs Medical Society, April 5. Colonel Skinner's address concerned reminiscences of his thirty years' service in the army. Col. Robert W. Patterson, commanding officer of the army and navy hospital at Hot Springs, spoke on the part the physician plays in the national defense program.

State Medical Election.—At the fifty-fourth annual meeting of the Arkansas Medical Society, Drs. Thad Cothern, Jonesboro, was made president; Edward E. Barlow, Dermott, was made president-elect; George B. Fletcher, Hot Springs National Park, Benjamin H. Hawkins, Mena, and Joseph G. Gladden, Western Grove, vice presidents; Dr. Royal J. Calcote, Little Rock, treasurer, reelected, and Dr. William R. Bathurst, Little Rock, secretary-editor, reelected and made delegate to the American Medical Association. The next annual meeting will be held at Fort Smith.

Personal.—Dr. Joseph P. Delaney, Jr., Little Rock, has been appointed deputy coroner of Pulaski County to succeed Dr. Louis L. Marshall, resigned.——The Craighead County Medical Society tendered a banquet in honor of the sixty-sixth birthday of Dr. William W. Jackson of Jonesboro, April 25. Dr. Jackson has practiced in that community about forty years.——Gertrude C. Stockard, Mountainburg, Crawford County, received first prize in an essay contest conducted by the Gorgas Memorial Institute and participated in by high school students in thirty-four states. The contest was for the best essay on "The Life and Achievements of William Crawford Gorgas and Their Relation to Our Health." The prize, amounting to $500 in cash and $250 for traveling expenses, was awarded by President Hoover at the White House, May 23. The donor of this and other prizes in the contest was Mr. Charles R. Walgreen of Chicago.

CALIFORNIA

Bills Enacted.—The following bills have become laws: senate bill 33, providing for the registration of all marriages, births and deaths and for a separate bureau for the preservation of such records; senate bill 207, providing that, when a defendant pleads not guilty by reason of insanity, the court must select two, and may select three, alienists from the medical staffs of the state hospitals to pass on the defendant's mental condition; senate bill 214, amending the medical practice act by providing that an applicant for a physician and surgeon's certificate must hereafter, in addition to the present requirements, show that he has completed not less than one year's training in a hospital approved by the board or has had other equivalent experience; senate bill 132, requiring all physicians, nurses, midwives and other persons having under their charge any person suffering from any wound or injury by his own act or by the act of another to report the patient's condition to the chief of police or to some other official designated in the bill; senate bill 618, making it unlawful for any person, firm or corporation to sell or furnish any barbital (diethylbarbituric acid) or veronal, except on the written order or prescription of a physician; senate bill 815, making an annual appropriation of $25,000 to provide for the promotion of maternal hygiene under the state department of public health; house bill 171, providing that whenever the state board of health deems a body required to be buried at public expense unsuitable or unnecessary for scientific purposes, the body may be cremated or buried at public expense; house bill 688, amending the medical practice act by providing that the board of medical examiners may accept in lieu of the required examination for a license, a certificate of examination issued by the National Board of Medical Examiners; house bill 809, amending the medical practice act by providing that licenses be "registered" in every county in which the holder practices. House bill 739 has become a law, creating a department of professional and vocational standards, to be headed by a director and to consist of the various boards of examiners, including the board of medical examiners. For the purpose of administration, the registration and clerical work of the department shall be organized by the director, but nothing in the act is to be construed as abolishing any of the boards or their functions except as to the clerical details.

DELAWARE

Infant Mortality at Wilmington.—Telegraphic reports to the U. S. Department of Commerce from sixty-four cities with a total population of 30 million, for the week ending May 4, indicate that the highest infant mortality rate (156) was for Wilmington and the lowest for Grand Rapids, Mich.; Knoxville, Tenn.; Spokane, Wash., and Worcester, Mass. The infant mortality rate at Wilmington for the year 1927 was 71 and for the other cities mentioned 53, 77, 55 and 58, respectively. Caution should be used in the interpretation of weekly figures, as they fluctuate widely. The facts that some cities are hospital centers for large areas outside the city limits or that they have a large negro population may tend to increase the death rate.

ILLINOIS

Bill Introduced.—Senate bill 511 proposes to create a drugless science board of examiners and to regulate the practice of the treatment of human ailments by any drugless science method without operative surgery.

Personal.—Dr. Elmer H. Best has been elected health commissioner of the city of Freeport.——Dr. Carles E. Trovillion has resigned as head of the state hospital at Anna, and Dr. George W. Morrow, formerly assistant at the Kankakee State Hospital, has been appointed to succeed him temporarily.——Dr. Fred E. Earel is mayor of Hoopeston, a city of about 6,000.——Dr. George A. Barnett has been appointed health officer of the village of Riverside.——Dr. James D. Smith, Benton, who celebrated his ninetieth birthday, May 17, is still in practice.

Roy Riddel Arrested.—Following an investigation by the state board of health of the medical activities of Roy Riddel of Milan, Rock Island County, he was arraigned in court, April 15, on charges of practicing without a license. He is reported to have pleaded guilty. The state charged that Riddel, who claimed to be a graduate of the Montreal University Faculty of Medicine, has been posing for years as a doctor in the vicinity of Milan. The University of Montreal Faculty of Medicine has no such name in its lists of graduates as far back as 1890, which was as far as a search was made. He had in his possession a physician's case containing hypodermic needles and bottles. Riddel, a Canadian by birth, is said not to have been naturalized as a citizen of the United States.

Chicago

Tuberculosis in Mexicans in Chicago.—Although the Mexican population in Chicago is only about 7,000 persons in a total population of about 3,000,000, the tuberculosis death rate among the Mexicans is so much higher than for the general population that it constitutes a problem. Sixty-eight Mexicans died in Chicago of tuberculosis in 1927, making a mortality rate

of 971 per hundred thousand, whereas the total tuberculosis rate of Chicago, according to Dr. Benjamin Goldberg, secretary of the board of directors of the Municipal Tuberculosis Sanitarium, is 82.7. Among the sixty-eight Mexican deaths in 1927 were fifty who were Mexican born, and of these 64 per cent died as charity patients in Cook County Hospital. In 1910 the Chicago Mexican population was only 102. What a large Mexican population will mean in health in future years may be foreseen by considering the tuberculosis situation in the present negro population, of whom there are about 170,000. It has been found necessary, Dr. Goldberg says, to devote three of the eight tuberculosis dispensaries, or 37 per cent of the entire tuberculosis facilities, to the care of tuberculous negroes. Mexicans living in cities are said to be more susceptible to tuberculosis than the negro. An increase in the Mexican population, therefore, up to 150,000 would practically monopolize all of the remaining five dispensaries. The operation costs for a tuberculosis dispensary averages about $104,000 a year.

Personal.—Miss Donelda R. Hamlin, director of the Hospital Library and Service Bureau since its establishment, has tendered her resignation to the American Conference on Hospital Service. The American Hospital Association has agreed to maintain and administer the Hospital Library and Service Bureau after June 30.——Dr. Sanford R. Gifford has been appointed professor of ophthalmology at Northwestern University Medical School and Dr. Murray Washburn, associate professor of medicine.——Dr. Irving S. Cutter, dean, Northwestern University Medical School, addressed the Harvard Medical Society at the Peter Bent Brigham Hospital, Boston, May 14, on "Etiology of Puerperal Fever — Its Historical Development."——Mr. Samuel Insull is reported to have offered to endow a chair for preventive medicine at Queens University, Kingston, Ont., for $50,000, provided the university officials agree with his representative as to the curriculum. Mr. Insull's first offer provided that the incumbent of the chair act as medical officer for Kingston but, the Chicago *Tribune* says, that offer was declined by the city.——Dr. Gladys R. H. Dick spent several days in Berea, Ky., in May with representatives of the state board of health rechecking the persons who gave a positive Dick test for scarlet fever during the recent epidemic in Berea.——Mr. Ed C. Jerman will receive the honorary degree of doctor of science at Franklin College, Franklin, Ind., June 10, in recognition of his contributions to roentgenology, especially a book on "Modern X-Ray Technic," which was reviewed in THE JOURNAL, Dec. 22, 1928, p. 2018. —— The Chicago section of the American Chemical Society awarded the Willard Gibbs gold medal, May 24, to Claude Silber Hudson, Washington, D. C., for his achievements in research on sugar.

INDIANA

Personal.—The staff of St. Mary's Hospital and the Vanderburgh County Medical Association, Evansville, presented a special program in honor of Dr. Joseph C. McClurkin at a recent meeting, who is now in his fiftieth year in practice. Dr. McClurkin, who is chief of the hospital staff, was also remembered with gifts.——Dr. Nettie B. Powell, Marion, has been elected president of the Eleventh District Medical Society.

"More Business and Less Noise."— The Muncie and Delaware county medical societies, May 21, appealed to the city and county authorities, in a spirit of cooperation, for support in an effort to eliminate unnecessary noise. A letter from the societies to the mayor, the board of safety and the chief of police stated that a survey showed that the medical profession faces a situation in which the harassing effects of noise on the sick is evident. They pointed out that the abuse of horns and mufflers and unnecessary traffic noises contribute to the discomfort of tired and nervous people, many finding it difficult to sleep on this account. The physicians stated that noises aggravate nervous ailments, resulting sometimes in a nervous breakdown. They gave a specific case in which a patient, critically ill, suffered a relapse as a result of the explosion of cannon firecrackers nearby. The physicians appealed now to the authorities in view of the Fourth of July celebration. They suggested that a good slogan for Muncie would be "More Business and Less Noise."

Society News.—The Eleventh District Medical Society was addressed, May 16, at Huntington, by Dr. Frank Smithies, Chicago, on "A New and Rational Method for the Examination of Patients with Intestinal Stasis and a Discussion of Treatment," and by Dr. Lloyd H. Ziegler, Rochester, Minn., on "Psychologic Problems Associated with Medicine and Surgery." Fred H. Bowers, attorney-at-law, spoke on "The Doctor Yesterday and Tomorrow."——The president of Eli Lilly and Company has subscribed $5,000, and Edward Kahn, $1,000, to the Leonard Wood Memorial Fund for the Eradication of Leprosy in the Philippine Islands.——At the twenty-fifth annual session of the Fourth District Medical Society, Greensburg, May 21, about 110 persons were present. The golf tournament played preceding the scientific session was won by Dr. Joel T. Carney, Batesville, with a score of 93. The banquet and musical program followed the meeting. Among the speakers were Drs. Charles E. Gillespie, Seymour, on "Acute Nasal Sinus Diseases," and George E. Denny, Madison, on "Acute Appendicitis."

KENTUCKY

Society Honors Octogenarian.—Following the celebration of the eightieth birthday of Dr. Zachary T. Cunningham, Princeton, recently, the Caldwell County Medical Society elected him president for the ensuing year. Dr. Cunningham, the oldest physician in that community, is still in active practice. The Caldwell County Medical Society will hold regular monthly meetings the first Tuesday of each month at Princeton.

Personal. — Dr. Joseph G. Bosley, Richmond, has been reelected health officer of Madison County.——Dr. Robert Lee Bird, South Covington, has been made president of the Latonia Civic Club.——Dr. Floyd P. Allen, Lexington, has resigned as health officer of Fayette County to accept a position with the Public Health Federation of Cincinnati and Hamilton County. ——Dr. Harris W. Terrell, Hartford, has resigned as director of the Ohio County Health Unit to accept a position with a hospital in Harlan.——Dr. John B. Floyd has been elected health officer of Richmond.——Dr. William L. Orr, Louisa, has resigned as health officer of Lawrence County to accept a similar position in Ozark, Ala., effective about May 15.

Conference of Health Officers and School for Technicians.—The county health officers for the first time conducted the program of the school for the county and city health officers, which was held in May. Dr. Albert Stewart of Scott County discussed "New Methods of Controlling Tuberculosis Cases That Are Not Able to Have Sanatorium Care," and William W. Cort, Ph.D., Johns Hopkins University School of Hygiene and Public Health, Baltimore, spoke on "Ascariasis." Seventy graduated from the school for laboratory technicians, May 18, and more than half of the graduates had positions waiting for them. The *Kentucky Medical Journal* says that requests are received from all parts of the country for these graduates. The object of this school is to make available technicians for physicians, hospitals and clinics. The course has been compiled in book form.

Society News.—Dr. William Allen Pusey, Chicago, formerly President of the American Medical Association, addressed the Muldraugh Hill Medical Society, April 25. This is one of the oldest medical societies in the state.——The Scott County Medical Society will be addressed, June 6, by Dr. Clarence J. Broeman, Cincinnati, on treatment of carcinoma of the uterus. ——The Graves County Medical Society at its annual meeting at Mayfield, May 7, was addressed by Drs. Harland V. Usher, Sedalia, on influenza complications, and Edwin A. Stevens, Mayfield, on blood pressure.——The Kentucky State Medical Association will conduct a graduate course in Louisville, July 8-20, under the same general arrangements as last year, although there will be more bedside conferences.——The Franklin County Medical Society recently presented the film "Movements of the Alimentary Tract in Experimental Animals," prepared by Drs. Anton J. Carlson and Arno B. Luckhardt, University of Chicago. The society was addressed, March 7, by Dr. Addie M. Lyon, Frankfort, on "Heredity in Mental Diseases."—— Dr. Thomas G. Cook, Nicholasville, addressed the Jessamine County Medical Society, recently, on "Some Dangers of Ephedrine Medication."

LOUISIANA

Society News.—The South Atlantic Mosquito Congress was organized, April 8, at a meeting in New Orleans of health authorities of Mississippi, Louisiana, Alabama, Texas and Florida. —— Dr. Jefferson A. Crawford, Lake Charles, was made president of the Louisiana State Pediatric Society for the ensuing year; Dr. John Signorelli, New Orleans, vice president, and Dr. Charles T. Williams, New Orleans, secretary-treasurer.——Dr. and Mrs. Thomas B. Pugh, Napoleonville, recently celebrated their golden wedding anniversary.

Dr. Lewis Honored.—At the golden jubilee of the Louisiana State Medical Society, New Orleans, April 7, Dr. Ernest Sydney Lewis, the only living charter member of the society, was made an honorary fellow, and his years of service to the community and profession were recalled by Dr. Rudolph Matas, emeritus professor of general and clinical surgery at Tulane

University of Louisiana School of Medicine. Dr. Lewis, now 88 years of age, retired from teaching at Tulane in 1911, becoming emeritus professor of obstetrics and gynecology, which chair he had occupied since 1876. Previously, he had been professor of materia medica and therapeutics and had occupied other positions on the faculty. A painting of Dr. Lewis was presented to the society.

MAINE

State Medical Meeting at Poland Springs, June 17-19.—The annual meeting of the Maine Medical Association will be held in Poland Springs, June 17-19, under the presidency of Dr. Frank Y. Gilbert, Portland. On the first day will be a clinic at the Central Maine General Hospital conducted by the hospital staff and by Dr. Edward W. Archibald, Montreal; the house of delegates will meet in the evening. Drs. Archibald will speak, Tuesday morning, on "Plastic Surgery of Chest Cases"; Leland S. McKittrick, Boston, "Surgical Aspects of Diabetes"; Harold M. Goodwin, Bangor, "Appendicitis"; Ralph W. Wakefield, Bar Harbor, "Poor Surgical Risks," and William D. Anderson, Portland, "Spinal Anesthesia." Following luncheon the visiting delegates will be introduced; Drs. Langdon T. Thaxter, Portland, will then discuss "Deep X-Ray Therapy"; Frank H. Jackson, Houlton, "Clinical Consideration of Acute Appendicitis"; Edward H. Risley, Waterville, "Cancer of Colon and Rectum," and George Minot, Boston, "Treatment of Anemia." The annual banquet follows with moving pictures of the Harvard University Medical School expedition to Liberia, presented by Dr. Richard P. Strong of the department of tropical medicine. Wednesday morning, Dr. Estes Nichols, Portland, will speak on twenty-five years' observation of tuberculosis in Maine; Dr. Charles B. Sylvester, Portland, clinical work on asthma in Maine during the last eight years; Dr. John P. Goodrich, Waterville, lantern slide demonstration of pathologic conditions of the chest revealed by roentgen examination; Dr. Channing Frothingham, Boston, "Primary Cancer of the Lung and Bronchus." In the afternoon, Drs. Talcott O. Vanamee, Portland, will discuss "Chronic Arthritis"; Robert B. Osgood, Boston, "The Causes of Arthritis," and Mortimer Warren, Portland, will exhibit a moving picture on cancer.

MICHIGAN

Dr. Houghton Retires.—Dr. E. Mark Houghton, after thirty-four years' service with Parke, Davis and Company, Detroit, retired, May 1, as director of the biologic and research laboratories. Dr. Houghton has contributed much to biologic standardization. He graduated from the University of Michigan School of Medicine in 1895 and immediately joined Parke, Davis and Company. He lectured in pharmacology at Detroit College of Medicine and Surgery and as a special lecturer at the University of Michigan. He was a delegate in 1908 of the U. S. Department of State to the International Congress of Applied Chemistry in London.

Personal.—Dr. Harry A. Schneider, for several years an executive officer of the Boston Psychopathic Hospital, has been appointed assistant superintendent at the Michigan Home and Training School, Lapeer, where he will also be chief of the medical staff. Dr. Schneider is a graduate of the University of Vermont College of Medicine, Burlington, 1909, and during the war served with the Black Hawk division (86th) in France. ——Dr. James L. Browning, until recently a resident of Chicago, has been appointed health officer of Iron Mountain City. ——Dr. Lowell L. Youngquist has resigned as health officer of the city of Marquette to become physician at the Marquette Prison, July 1, succeeding Dr. Russell L. Finch, who will move to Lansing to engage in practice. Dr. Finch has been prison physician more than six years.

Human Constitution Study Club.—A group of Detroit physicians undertook about two years ago a study of the human constitution, receiving the cooperation of librarians, museums and art commissions. A systematic grasp of the subject was planned, but it was soon found that a review of the literature was disappointing because of the lack of simple organization, and it was necessary to establish a new system. The nucleus of a special library has been formed, and the study of normal individuals has been the basis of an arrangement in simple definite types. The University of Michigan placed at the disposal of the club a group of Filipino skulls; an art commission gave two mummies. Roentgenologic analysis of the entire body, anthropometric measurements, behavior studies and endocrine evaluations have been made. The club is unattached to any institution, but a human constitution clinic has been established, with members of the club referring the patients. The study has possibilities for the artist-anatomist as well as the physician. Dr. Samuel E. Sanderson is the president.

MINNESOTA

Personal.—At the annual dinner of the Hennepin County Medical Society, May 6, Dr. Edwin L. Gardner, Minneapolis, was elected president for the ensuing year. Drs. James T. Christison, St. Paul, Edward A. Meyerding, St. Paul, Herman M. Johnson, Dawson, George A. Earl, St. Paul, and Mr. Manley Brist, attorney for the state medical society, addressed the meeting, and Dr. William A. O'Brien, Minneapolis, was toastmaster.

State Medical Election.—At the recent annual meeting in St. Paul of the Minnesota State Medical Association, Drs. Samuel H. Boyer, Duluth, was elected president; Robert C. Farrish, Sherburn, and Berton J. Branton, Willmar, vice presidents; Albert G. Schulze, St. Paul, treasurer; Edward A. Meyerding, St. Paul, secretary, reelected, and Charles B. Wright, Minneapolis, and James T. Christison, St. Paul, delegate and alternate, respectively, to the American Medical Association.

Society News.—The graduate course in tuberculosis given at the state sanatorium at Ah-Gwah-Ching in May was attended by thirty-eight physicians, some of whom came 250 miles. Among others, Dr. Herbert A. Burns, the superintendent, gave a clinic on management of tuberculosis, and Dr. Gordon G. St. Clair a clinic on renal tuberculosis. Drs. Frederick F. Kumm spoke on the importance of history taking in the diagnosis of tuberculosis; Francis F. Callahan of the Pokegama Sanatorium, on early diagnosis; Charles B. Wright, Minneapolis, on gastro-intestinal tuberculosis; Leo G. A. Rigler, Minneapolis, on the roentgen rays in tuberculosis.——The Minnesota State Medical Association, through its legislative committee, succeeded at the last session of the legislature in having killed bills which sought to allow chiropractors and osteopaths to treat patients in all hospitals supported by public funds. The society has been instrumental in having a bill passed which will raise the educational requirements of the chiropractors and osteopaths, and successful in preventing the passage of other bills sponsored by some of the cults.

NEVADA

Symposium on Better Obstetrics.—The Washoe County Medical Society was addressed, April 9, by Dr. William L. Howell, Gardnerville, on bacteriology of puerperal woman; Dr. Albert R. Da Costa, Jr., Reno, "Is the Present Increase in Cesarean Section Justified?"; Dr. Sidney K. Morrison, Reno, "Our Present Knowledge with Reference to Puerperal Eclampsia and Treatment"; Dr. Alexander M. McIntyre, Reno, "Why Women Die in Childbirth," and Lyman Vawter, D.V.M., of the University of Nevada, on "Puerperal Eclampsia in Domestic Animals." Thirty physicians attended this meeting, some traveling 350 miles, and others over mountains at night.

NEW JERSEY

Society News.—Dr. Frances H. Arthur, Elizabeth, was elected president of the New Jersey Women's Medical Association at its fifth annual meeting in Newark, April 13; seventeen new members were admitted.——Dr. Louis Shalet has been appointed superintendent and medical director of the Deborah Jewish Consumptive Relief Society at Browns-Mills-in-the-Pines.——A testimonial dinner in honor of Dr. Eugene Way, Dennisville, was given at Somers Point, May 23, celebrating his golden anniversary in the practice of medicine. The toastmaster was Dr. Aldrich C. Crowe, Ocean City, and among others Dr. William E. Darnall, Atlantic City, Ephraim R. Mulford, Burlington, and Henry O. Reik, Atlantic City, spoke. Col. Charles M. Gandy, U. S. Army Medical Corps, retired, spoke on "My Room-Mate at Jefferson Medical College."

NEW YORK

Practice of Medicine by Organizations.—The *New York State Journal of Medicine*, May 15, contains a symposium by the leaders of some organizations engaged in the practice of medicine as well as the point of view of the physician in practice. The papers were presented before the Medical Society of the County of New York in March. They are:

Dr. William Darrach, dean, College of Physicians and Surgeons, "The Profession and the Medical Center."
Dr. Walter C. Klotz, director, "The Profession and the Cornell Pay Clinic."
Edward T. Devine, Ph.D., "The Profession and the Bellevue-Yorkville Health Demonstration."
Dr. Eugene Lyman Fisk, medical director, Life Extension Institute, "The Profession and the Life Extension Institute."
Dr. Charles Gordon Heyd, treasurer of the Medical Society of the State of New York, "The Standpoint of the Profession."
Dr. James A. Miller, New York, "The Effect of the Public Health Program on the Interests of the Private Physician."

Report on Graduate Education.—Between July 1, 1928, and Jan. 1, 1929, the Medical Society of the State of New York, through its committee on public health and medical education, provided its members in thirty-one counties with graduate education in obstetrics, tuberculosis, internal medicine, surgery, cardiology and gastro-enterology, blood diseases and physical therapy. These courses were given before fourteen county medical societies. The total attendance was 2,630, the largest attendance at any one course being 836, and the smallest attendance 126. The total cost of the courses was $2,266.55; the average cost per attendant was 86 cents. The state society for two years now has taken over the graduate instruction before the county societies; in that time 241 lectures have been given by seventy-nine speakers from fourteen different cities. The committee expresses its gratitude to these men who have accepted assignments at personal sacrifice, in some cases involving trips of considerable inconvenience.

State Medical Meeting at Utica, June 3-6.—The Medical Society of the State of New York will hold its one hundred and twenty-third annual meeting at Utica, June 3-6, under the presidency of Dr. Harry R. Trick, Buffalo. The guest speakers will be Drs. John B. Deaver, Philadelphia, on intestinal obstruction and Jonathan M. Wainwright, Scranton, Pa., on diseases of the breast; J. Lee Kirby-Smith, Jacksonville, Fla., on creeping eruption; Jay Frank Schamberg, Philadelphia, on modern treatment of syphilis; Theodore H. Weisenburg, Philadelphia, traumatic neurosis affecting the eye, ear, nose and throat; Francis C. Grant, Philadelphia; Thomas J. Heldt, Detroit, treatment of mental diseases in a general hospital; James C. Small, Philadelphia, rôle of streptococci in rheumatic fever, John A. Oille, Toronto, the heart in rheumatic fever, and George F. Suker, Chicago, lesions of the visual pathway from chiasm to cuneus lobe and the pituitary relation thereto. Many New York physicians will present papers. The Oneida County Medical Society will provide entertainment. A play entitled "The Pirate's Bride," written by a Utica physician, the songs by another local physician, the music by another, and the orchestra score by a fourth, will be presented, accompanied by an orchestra composed largely of physicians and members of their families. The ladies will be given a trip through the Lansingkill Gorge and the West Canada Creek Valley, and to the old battle fields. At the banquet, Wednesday evening, entertainment will be provided by Utica's Amateur Dramatic Organization, the president of which is a practicing physician, as are many of its members. Local hospitals will welcome visiting physicians to clinics. The delegates will hold a dinner following the afternoon session Monday. The character of the program, and the setting in a beautiful and historic community, will make this meeting interesting and well worth the effort of every one who can possibly attend.

New York City

Judge Frees Birth Control Clinic Physicians.—The two women physicians and three nurses who were arrested, April 15, when the Birth Control Research Bureau was raided by police, were released, May 14. Magistrate Rosenbluth, in dismissing the cases, said in part: "The law is plain. If a doctor in good faith believes that a patient is a married woman and that her health requires prevention of conception, it is no crime to so advise and instruct therein. (*People* v. *Sanger*, 22 N. Y. 192.) Good or bad faith is of the very essence to determine guilt or innocence under the statute. . . . One cannot fairly come to a conclusion as to the good faith required of defendants by the statutes without knowing something of the diagnosis. The diagnosis will tell whether the prescription was warranted or not. Without such evidence there is no basis upon which the court can find that there is probable cause to believe a crime has been committed." The judge apparently attributed beguilement to the police woman who framed a need for birth control information rather than bad faith to the doctor who gave such advice.

Society News.—The Medical Society of the County of Kings was addressed, May 21, by George R. Cowgill, Ph.D., New Haven, Conn., on "Physiologic and Biochemistry Aspects of Deficiencies, with Especial Reference to the Vitamin B Complex"; Dr. Augustus L. Harris, "Operative Injuries of the Ureter: Ureteral Anastomosis," and Dr. Herman O. McPheeters, Minneapolis, on "Present Status of the Injection Treatment of Varicose Veins."——The Brooklyn Society of Internal Medicine, May 24, following a clinical session, was addressed by Dr. Anthony Bassler on "Examination and Diagnosis of Chronic Diarrheal States—A Few Points on Therapy," and by Dr. Frank C. Yeomans on "Clinical Conditions of the Distal Colon and Rectum."——The New York Branch of the American Urological Association will be addressed, June 5, at the New York Academy of Medicine, by Dr. A. von Lichtenberg, director, department of urology, St. Hedwig's Hospital, Berlin, Germany, on "Indications for Conservative Operation in Hydronephrosis."——Dr. G. Canby Robinson, director of the medical center to be constructed by Cornell University in conjunction with New York Hospital, has been elected president of the Harvey Society for the ensuing year.——Dr. Russell L. Cecil, assistant professor of clinical medicine, Cornell University Medical College, addressed the New York Association of Diagnostic Laboratories, May 16, on "The Relationship of the Physician to the Laboratory."

NORTH DAKOTA

Personal.—Dr. Adolphus W. Guest has resigned as superintendent of the North Dakota Hospital for Insane at Jamestown.——Dr. Thomas J. Glasscock, Finley, has been elected president of the North Dakota Health Officers' Association for the ensuing year.

State Medical Meeting at Fargo, June 6-7.—The annual meeting of the North Dakota State Medical Association will be held at Fargo, June 6-7, under the presidency of Dr. William F. Sihler, Devils Lake. The program includes papers by Drs. John S. Coulter, Chicago, on "General Consideration of Physical Therapy" with motion pictures; Carl H. Davis, Milwaukee, motion picture reels of obstetric deliveries; Frederick E. B. Foley, St. Paul, "Management of Urinary Obstruction and Bladder Lesions"; William A. Jones, Minneapolis, "Science and Art in the Practice of Medicine"; Kenneth A. Phelps, Minneapolis, "Sinus Infections—General Symptoms and Diagnosis"; George E. Brown, Rochester, Minn., "Recent Studies in Hypertension"; George B. Eusterman, Rochester, Minn., will give a clinic on gastro-intestinal disease; Arthur C. Strachauer, Minneapolis, will give a surgical clinic and speak on "Cancer of the Bowel; William A. Jones, Minneapolis, will give a neurologic clinic; Harry J. Fortin, Rochester, Minn., will speak on "Fracture Problems," and Edward D. Anderson, Minneapolis, "Feeding Problems of Infancy and Childhood." Dr. Eusterman will address the annual banquet, Thursday evening, on "Recent Advances in Gastro-Intestinal Diagnosis." Many North Dakota physicians will take part in the program. The North Dakota Academy of Ophthalmology and Otolaryngology will meet at the same time.

OHIO

"Intern Night" at Cleveland.—Two hundred and fifty members of the Cleveland Academy of Medicine attended the annual "intern night," April 19. Of the twenty papers received from contestants, the committee selected four for oral presentation. Following their delivery while the judges adjourned, the audience was entertained by a quartet of representatives of Western Reserve University and Otto Saphir of the City Hospital. The judges comprised Drs. Wingate Todd, Ralph K. Updegraff and Carl H. Lenhart. The prizes were $50, $25, a blood pressure apparatus and a book. They were won by Drs. Carey C. Barrett, whose paper was on "Keratodermia Blennorrhagica"; David A. Chambers, "Rheumatic Heart Disease"; Justus C. Pickett, "Melanotic Whitlow," and Frank W. Knittel, "Malta Fever."

Good Work by Better Business Bureau.—One O. M. Herbert, who held himself out as a spiritualist and healer, was the subject of a bench warrant issued April 16 by Judge Donovan, who ordered Herbert's bond forfeited. Herbert had been arrested weeks previously on a warrant sworn out by State Medical Inspector Frank Dorsey on evidence obtained by the Better Business Bureau of Toledo. He was charged with violating the state medical practice act.——L. D. Schwanzel, who claimed to be a physician, pleaded guilty, April 16, to the charge of practicing medicine without a license. He was arrested by the state medical inspector on evidence obtained by the Better Business Bureau, and was fined $100 and costs, of which $75 was suspended on his agreement to cease violating the law. Schwanzel was said to be connected with the Bioray concern, which puts out the "Bioray Sun Lamp."——Hardy Allen, who described himself as the "World's Greatest Mystery Man," was fined $200 and costs for practicing medicine without a license. ——O. D. Dilley, who was advertising a "cure" for appendicitis in the local newspapers, was investigated by a Better Business Bureau representative. Dilley prescribed treatment and explained to the investigator that he also took care of cases of cancer, diabetes, influenza and other conditions. In addition, he gave "light treatments." When arraigned on the charge of violating the medical practice act, Dilley pleaded guilty and was fined $100 and costs, of which $75 was suspended on his promise to discontinue his quackery.

PENNSYLVANIA

Society News. — The Allegheny County Medical Society, Pittsburgh, was addressed, May 21, by Dr. Sidney Rosenburg, winner of the intern case report contest, on "A Case of Pneumococcic Peritonitis" and Dr. Leo H. Criep on skin sensitization tests. Dr. Henry T. Price discussed the mothers' milk registry at the Magee Hospital and Louis K. Manley, Ph.D., "Medicine and Business."——The Pittsburgh Urological Association elected Dr. James C. Burt president for the ensuing year. The society was addressed, May 13, by Dr. Gustav Kolischer, Chicago.

Philadelphia

Alumni Day at Pennsylvania.—The University of Pennsylvania medical schools will provide a series of clinics during the annual medical alumni reunion, June 14-15, and will conduct ward walks and inspection trips through both the new and the old buildings. A unique program has been provided for all alumni of the university on Franklin Field, June 15, which will be in the nature of a county fair with features too numerous to mention. Some of them will be boxing, wrestling and a ball game with Dartmouth. But at 8 p. m. the medical alumni will hold its annual election of officers and renewal of old friendships at the Medical Laboratories, Thirty-Seventh Street and Hamilton Walk. It will be recalled that silver cups were presented last year at this meeting for the class which had most members present. Last year 240 men were present from eighteen states, and it is expected that at least that number will be present, June 15.

Anatomic Laboratory Dedicated. — The University of Pennsylvania dedicated its new $1,000,000 anatomy and physiologic chemistry laboratory, May 16. The provost, Josiah H. Penniman, LL.D., presided; Dr. Simon Flexner, director of

laboratories, Rockefeller Institute for Medical Research, was the principal speaker. Dr. Flexner, who was associated with the university as professor of pathology from 1899 to 1903, was given the honorary degree of doctor of science at the dedication. The new laboratory is a Y-shaped building of brick and stone, connected with the old laboratory, in which are the administrative offices of the schools of medicine. Funds for its construction were provided by the Rockefeller Foundation and the General Education Board, each of which gave $250,000, and by the university, which raised a like amount. The second floor has forty-five rooms, all used by the department of anatomy. The two upper floors contain research rooms and student laboratories.

SOUTH CAROLINA

State Medical Election.—At the annual meeting of the South Carolina Medical Association, Charleston, May 7, Dr. Charles R. May, Bennettsville, was made president for the ensuing year; Drs. G. P. Neel, Greenwood, J. B. Johnston, St. George, and J. W. Davis, Clinton, vice presidents, and Dr. Edgar A. Hines, Seneca, secretary-treasurer, reelected. The next annual meeting will be in Florence.

Personal.—Dr. George D. Heath, Jr., who recently resigned as health commissioner of Bloomington, Ill., assumed the duties of health commissioner of Florence, April 20, succeeding the late Dr. Percy H. Brigham. Dr. Heath is a native of South Carolina, and a graduate of the University of Louisville School of Medicine; he served for several years in the U. S. Medical Corps, was formerly deputy state health officer of Maryland, and was assistant epidemiologist of the Illinois State Department of Health

TENNESSEE

Personal.—Dr. James B. Black has been appointed health officer of Rutherford County to succeed Dr. Harry S. Mustard, resigned. Dr. Black formerly lived in Jackson, Miss. —— Dr. Milton S. Lewis has been made president of the staff of the Nashville General Hospital to succeed Dr. Samuel John House.——Dr. Ransom S. Gage, Dover, Ohio, has donated a 167 acre farm in Franklin County, Tenn., to the Alvin York Agricultural Institute. —— W. F. Wefring, newly appointed director of health of Norway, will be the guest of the Tennessee State Department of Health, June 4-9. Recent visitors to the department included Drs. Frederick F. Russell of the Rockefeller Foundation, and William H. Howell, director, school of hygiene and public health, Johns Hopkins University, Baltimore.

Society News.—The women's auxiliary of the Memphis and Shelby County Medical Society is endeavoring to establish a loan fund for deserving medical students who need assistance. The auxiliary held a bridge luncheon at the Parkview Hotel, Memphis, May 7, the proceeds of which are to be devoted to the student loan fund of the University of Tennessee. —— Dr. William E. Howell, Morristown, has been elected president of the East Tennessee Medical Association for the ensuing year. The next annual meeting will be at Kingsport.——Dr. Charles M. McKenna, Chicago, addressed the Memphis and Shelby County Medical Society in April on "Tuberculosis of the Urogenital Tract." —— Memorial services for the late Dr. John A. Witherspoon were held at Vanderbilt University School of Medicine, Nashville, May 24. Dr. Waller S. Leathers presided. Chancellor Kirkland spoke on "Dr. Witherspoon and Vanderbilt University"; Dr. Lucius E. Burch, "Dr. Witherspoon as a Member of the Medical Faculty and Teacher"; Dr. Eugene L. Bishop, "Dr. Witherspoon as an Ardent Supporter of Public Health"; Dr. William D. Haggard, "Dr. Witherspoon as a Clinician and Medical Organizer," and Dean Oscar E. Brown, D.D., "Dr. Witherspoon as a Citizen and Friend."

TEXAS

Bills Introduced.—House bill 122 proposes to provide for the sexual sterilization of certain inmates of state institutions. Senate bill 79 and house bill 140 propose to provide for an annual registration fee of $2 for all practitioners of the healing art.

WASHINGTON

Society News.—Dr. William J. Mayo, Rochester, Minn., addressed a special meeting of the Walla Walla Medical Society, May 23, on cancer problems. Dr. and Mrs. Mayo were guests at an informal dinner given by the society. The society was addressed, May 15, by Dr. Mitchell Langworthy, Spokane, on fractures, illustrated with lantern slides and demonstrations; by Dr. John B. Harter, Seattle, on plastic surgery, and by Dr. Frederick H. Brush, Yakima, president of the state medical society on medical organization

GENERAL

First Aid at Sea.—Since 1881 the U. S. Public Health Service has been publishing a book called "The Ship's Medicine Chest and First Aid at Sea." A new edition has been published this year. The book is for ships that have no physician on board. It gives advice in caring for the sick who are in the hands of seamen and officers. The great majority of the 10,000 merchant vessels registered by the U. S. Department of Commerce do not carry medical officers. The custom of giving advice in emergencies by radio has made it necessary to standardize medical equipment on ships. A copy of the book may be obtained by the master of any American documented merchant vessel on request to the U. S. Public Health Service.

Society News.—Dr. Frank Smithies, Chicago, was elected president of the American Gastro-Enterological Association at the annual meeting in Atlantic City, May 7.——At the annual meeting of the American Climatological and Clinical Association, Old Point Comfort, Va., May 2, Drs. Gerald B. Webb, Colorado Springs, was made president; John P. Sawyer, Cleveland, and Ray W. Matson, Portland, Ore., vice presidents, and Arthur K. Stone, Framingham Center, Mass., secretary. ——At the twelfth annual meeting of the American Association

for Thoracic Surgery in St. Louis, April 25-27, Dr. Wyman Whittemore, Boston, was elected president; Dr. Ethan F. Butler, Elmira, N. Y., vice president; Dr. Duff S. Allen, St. Louis, secretary, and Dr. Carl Eggers, New York, treasurer. ——The Medical Women's National Association will hold its annual meeting in Portland, Ore., July 7-9, at the Heathman Hotel. Among the speakers will be Drs. Frances Eastman Rose, Spokane, Wash., on race betterment; Alice Hamilton, Boston, and Kate B. B. Karpeles, Washington, D. C., on legislation, and Kate Campbell H. Mead, Middletown, Conn., on history of medicine. The incoming president will be Dr. Ellen C. Potter of the state school for girls, Trenton, N. J.——At the annual meeting of the American Proctologic Society, Detroit, May 13-15, Dr. Walter A. Fansler, Minneapolis, was made president; Dr. William O. Hermance, Philadelphia, vice president, and Dr. Curtice Rosser, Dallas, Texas, secretary-treasurer.

Medical Bills in Congress.—S. 1171, introduced by Senator Ransdell, Florida, proposes to establish and operate a National Institute of Health, to create a system of fellowships in said institute, and to authorize the government to accept donations for use in ascertaining the cause, prevention, and cure of disease affecting human beings; H. R. 3143, introduced by Representative Parker, New York, is the companion bill in the House, to the Senate bill just described. S. 1195, introduced by Senator Jones, Washington, proposes to coordinate the public-health activities of the Federal Government; H. R. 3142, introduced by Representative Parker, New York, is the companion bill in the House. H. R. 3041, introduced by Representative O'Connell, New York, proposes to amend the World War Veterans' Act so as to provide hospital treatment for honorably discharged men of the Regular Army, Navy, and Marine Corps, and for fleet reservists and retired officers and enlisted men, suffering from neuropsychiatric or tuberculous diseases, paralysis agitans, encephalitis lethargica, or amebic dysentery, or the loss of sight of both eyes, or other ailments that require hospitalization, regardless whether such ailments or diseases are due to military service or otherwise.

Physical Education in City Schools.—The bureau of education of the U. S. Department of the Interior made a study of physical education in city public schools. Thirty-five states are said to have laws requiring that physical education be included in the curriculum. Fifteen city public school systems prescribe ability to swim as a special graduation requirement in secondary schools. In Bristol, Conn., about 70 per cent of the graduates of the secondary schools are able to swim, although it is not required for graduation. Many city school systems provide instruction in hygiene in the elementary schools. The larger cities include hygiene in the junior high school. Instruction in hygiene is sometimes given by nurses, the health teacher, the science teacher or by a special teacher. In some cities, it is provided by the English, home economics, civics, biology, physiology or health departments. In addition to class work in physical education, some cities have children take part in exhibitions, field meets, competitions and pageants, although participation is not usually compulsory. The tendency seems to be to have physical education from three to five times a week in the elementary schools, with an average of thirty-five or forty pupils in the class. The secondary schools tend to require fewer times a week in larger classes. Less than 50 per cent of all the high schools require a special suit for participation in physical programs. A small number of elementary schools require it. Many superintendents believe their greatest difficulty in administering physical education in the schools is a lack of trained teachers. Scarcely 50 per cent of the high schools covered by this report have playgrounds or athletic fields, while only a beginning has been made in providing swimming pools.

Medical Women's International Association.—About 270 women physicians, representing twenty different nations, attended the sessions of the Medical Women's International Association in Paris, April 10-15. The papers presented concerned subjects most vital to women in medicine and were interpreted in English and German. Lady Barrett of England was succeeded in the presidency by Madame Thuillier-Landry, France. The delegates from the United States were Drs. Louise Tayler Jones and Agnes Conrad of Washington, D. C.; Kate C. H. Mead, Sarah Josephine Baker and Jane E. Robbins of Connecticut; Esther Lovejoy, Grace N. Kimball and Angenette Parry of New York; Mabel E. Gardner, Middletown, Ohio, and Helena T. Ratterman of Cincinnati, and Bertha Van Hoosen, Effa V. Davis, Emma Gillmore, Chicago, and Mary McKibben Harper, Oak Park, Ill. Among delegations recently admitted to the association were those from Japan, Spain, Bolivia, Poland, Jugoslavia, Czechoslovakia and Georgia in the Caucasus. The evident cordial international relations befitted the Hall of Intellectual Development of the League of Nations in which the sessions were held. France honored the association in many ways. President Doumergue received at the Palace of the Luxembourg and personally conducted the delegates through the palace and senate chambers. The mayors of Paris and Versailles gave receptions, as did Professor Calmette of the Pasteur Institute and other prominent medical men and Mesdames Thuillier-Landry and Chatelin. The courtesy and hospitality of the French Association were manifest at every turn, and the afternoons were given over largely to receptions. The Medical Women's International Association was organized in New York in 1919, and the constitution and by-laws were adopted at Geneva, Switzerland, in 1922.

Overdoing the Word "Health."—The U. S. Department of Agriculture says that the use of the word "health" in connection with foods constitutes misbranding under the food and drugs act. The words "health-foods" implies that these products have curative or health-giving properties. Generally they merely possess some of the nutritive qualities to be expected in any wholesome food. The consumer, W. G. Campbell of the department says, is led to believe that our ordinary diet is deficient in vital substances and that so-called health foods are absolutely necessary to conserve health. The effort to give the impression that we all need something added to our everyday diet if we are to avoid nutritional disaster is a misrepresentation which the law enforcing authorities aim to combat. So-called health-giving biscuits, waters and foods are not only a waste of money if purchased for their curative properties but cause a more serious loss, as they are relied on as a substitute for proper corrective measures. There are three general classes of "health foods" which flood the market. The first, the administration says, includes whole wheat, rye, oats, bran and mixtures of these. These grain products are misrepresented when curative properties are claimed for them and when the manufacturer says they provide "life-giving vitamins in their tasty natural state." The second group includes mineral waters or imitative mineral waters sold by promoters who aim to convince the consumer that by using them at home the same benefits may be had as by staying at a resort and following a proper diet and taking a rest. The administration proposes to insure not only truthful labeling of these products but also their purity and freedom from contamination. The third group of "life-giving" products includes candy containing calcium, salt containing iodide, food materials with phosphates added, bread containing carrot flour, crackers containing senna, and chewing gum containing phenolphthalein. In its endeavor to protect the consumer and the honest manufacturer, the Food, Drug and Insecticide Administration of the U. S. Department of Agriculture often has to do no more than advise manufacturers to correct the exaggerated claims made for health foods.

FOREIGN

International Congress of Medical Aviation.—Representatives of thirty-five nations met in Paris, May 14, for the first International Congress of Sanitary Aviation. The United States was represented by Dr. Louis H. Bauer, chief of the medical section, aeronautic branch, department of commerce; by Dr. Rupert Blue, U. S. Public Health Service, and by military officers from the American embassy in Paris. Demonstrations were made to show that it is possible to perform minor operations and treatment of the injured while planes are in the air. Some planes are equipped as operating rooms, ambulances or dressing stations. France and Great Britain are planning sanitary aviation posts throughout their colonies. Many so-called clinical planes are now in service, and the convention received reports of their medical work in Africa, Indo-China and remote places.

Health Center in Palestine Opens.—The Nathan and Lina Straus Health Center at Jerusalem was opened, April 30, in the presence of an audience including the British high commissioner to Palestine, religious dignitaries of various creeds and the consular corps. The center has complete equipment for infant welfare work and preventive medicine, including a large pasteurization plant for improvement of the milk supply. Nathan Straus of New York gave $250,000 to Hadassah for the building with the provision that the latter maintain the center. Its activities will extend to the entire population regardless of race or creed. The building is outstanding in Jerusalem, but a similar one is being built at Tel-Aviv, which also will be administered by Hadassah. Mr. Straus built and maintained depots in the United States and abroad for twenty-two years, the New York *Times* says, where pasteurized milk was distributed without charge to poor children.

Foreign Letters

LONDON

(From Our Regular Correspondent)

May 4, 1929.

Housing and Town Planning

The National and Town Planning Council decided, in view of statements that in spite of the building of 1,200,000 houses since the war the slum problem showed little alleviation, to set up a committee to "investigate and report upon the problem in all its phases, with special reference to the housing of the lowest-paid workers." The committee has just issued its report. The conclusion is that on the basis of one and a half persons to a room, a fourth of the population of England and Wales is living in overcrowded conditions, but that "until a better system of measuring overcrowding is adopted it will not be possible to arrive at a true estimate of the facts. In Scotland, where the standard of housing is lower, and the one and two roomed 'house' is common, overcrowding is much worse than in England and Wales." The committee estimates that 2,000,000 houses are overcrowded and that, taking into account the replacement of unfit houses as well as the abatement of overcrowding, well over 1,000,000 new houses are needed for these purposes alone. The principal reasons the slum dwellers have not moved directly into the new municipal houses have been: (1) inability to pay the necessary rent; (2) cost of transport to and from work; (3) the psychologic factor. This operates to a considerable extent with middle-aged and elderly people. They have grown up in the slums and they are reluctant to leave familiar places and their neighbors. The committee thinks that as a minimum it might be sufficient if a program were accepted of 150,000 working-class houses per annum for the next ten years. It expects that, in addition, approximately 50,000 larger houses (nonsubsidized) would be built each year, making, say, 200,000 altogether.

Mental Stress as a Factor in Disease.

In a book entitled "Health, Disease and Integration," Dr. H. P. Newsholme, health officer for Birmingham, has taken a somewhat new standpoint as regards the causation of disease. His book originated in a study of epidemic encephalitis which he found often followed some shock to the mind, or was connected with a long period of unhealthy mental life. This led him to pay attention to the effect on the body of stress within the mind, and he puts forward a case in favor of a mental element in the causation of a great many diseases which are usually looked on as due to germs or other material agents. It has been held from ancient times that poisons may be formed within the body under the influence of strong emotion, such as fright or anger, but Dr. Newsholme goes further and suggests that many kinds of illness are a result of a poisoning of this kind, such internal poisoning being due to mental stress arising from lack of harmony between the person and his environment. While all authorities agree that the development of infectious disease depends on two factors, the "seed" or germ, and the receptiveness of the "soil" or patient, Dr. Newsholme thinks that far too little attention is paid to the "soil." He considers that illness may take its character rather from the patient himself than from the nature of the infecting germ. "Although we pay lip service to the importance both of soil and of seed," he says, "we have concentrated chiefly on the seed and on a partial, a physical, aspect of the soil. It would not be altogether untrue to say that we seem to be approaching a standstill in our advance in the understanding of disease from this aspect. In concentrating on his physical aspect, his body, it has been to a considerable extent forgotten that the individual is not merely body; that he is mind, body and spirit." Science, Dr. Newsholme believes, has not yet reached a stage at which it can dogmatize in regard to spiritual questions. So long as science turns its attention to the material as distinct from the spiritual aspect of life, so long is its verdict on such fundamental questions of little value. "Medicine," he concludes, "is usually regarded as being concerned primarily with the health of the body and mind. But if the health of both depends ultimately on the health of the spirit, then medicine, to be effective in its proper domain, must be intimately interwoven with the art and science of religion."

Atmospheric Pollution from Power Stations

The danger of sulphurous fumes from a large power station which is to be built in London at Battersea for generation of electricity has given rise to considerable concern among the public. The Metropolitan Public Gardens Association has passed a resolution deploring the proposal to erect this station as being liable to cause serious injury by the emission of large quantities of sulphurous fumes, not only to important buildings but also to many public and private gardens and open spaces in London, and it strongly urges that some alternative site be secured that is not open to this objection. The London Power Company is under the obligation to take measures "for preventing, so far as is reasonably practicable, the evolution of oxides of sulphur," but no method exists at present of keeping sulphur compounds out of the fumes. It is possible that a chemical process might be adapted for use at a power station, but probably it would not yield a by-product of sufficiently high quality to help pay for the cost of extracting it. It would be an expensive process and, so far as can be ascertained, a start has scarcely been made in the preparation of apparatus for the purpose. A chemist who has given much attention to fuel problems suggests that the problem might be dealt with in three ways—getting rid of part of the sulphur from the coal before it is burned, confining a further portion of it to the ash, and washing the remainder out of the combustion gases. At present there is no process of getting rid of the sulphur from the gases, and any such process must be costly because the concentration of sulphur is relatively small. The problem might be partly solved by cleaning the coal and removing part of the sulphur. This is already being done commercially by a plant in South Wales at a cost of 12 cents a ton. By this plant 45,000 tons is being treated in a year, and a bigger plant capable of dealing with 500,000 tons a year is being prepared. The result of this treatment is to reduce the ash to 2 per cent, and this is an ash which retains more sulphur than it would retain if the other refuse were still there.

Reform of Local Government

A far-reaching scheme for the reform of local government has just become a law. Many of the reforms are of medical importance. The tendency of the act is to widen the area over which numerous local government services will be administered, not because the wider area is considered as an end in itself, or in disregard of the sentiment which in this country has always tended to grow most easily and strike the deepest roots in attachment to the conduct of affairs within the narrowest possible local limits, but because it is a necessary means to (1) a full and proper provision of services for the benefit of the inhabitants of each part of the wider area; (2) an economical and sensible distribution of the work to be done, and (3) a fair distribution of the cost of the work between the taxpayers of each part of the wider area. The object is that no district shall leave inhabitants without the minimum sanitary requirements of civilized life merely because there is not money enough in the restricted area by itself to pay for them.

The most far-reaching change is the transfer to the local authorities of work which for nearly a century has been organized under a distinctive name and under separate legislation

by the poor law authorities. This involves the organization and management of indoor and outdoor relief, the latter including domiciliary medical treatment and the control of vagrancy; responsibility for vaccination; responsibility for infant life protection; responsibility for collection of fundamental vital statistics, and responsibility, severally or jointly, for the provision, maintenance and management of all public institutions for the cure or mitigation of physical or mental disease. Local authorities are placed for the first time in a position to survey the whole of the public hospitals in their areas and to use them to the best advantage. A clear direction is given that the process known for the last twenty years as the break-up of the poor law shall be taken in hand in a practical manner and carried out so far as the existing law and the prevailing circumstances allow. After more than fifty years of discussion and unsatisfactory progress, definite provision is made to secure to every county district council at the earliest possible moment the services of a health officer, whose attention will be concentrated on public duties. One result of the act must be to extend the occasions for unpaid service previously open to men and women of public spirit.

PARIS

(From Our Regular Correspondent)

April 24, 1929.

Precautions Against Smallpox in View of the Epidemic in England

The fear that smallpox, which is prevalent in England in what appears to be a rather virulent form may be brought to France, still occupies the public mind and awakens anxiety among the physicians as well. It is very generally held that the protective measures adopted in France have been insufficient and not promptly taken; that the authorities have allowed considerations of diplomacy and commercial interest to prevail, whereas such considerations should not be taken into account when so grave a matter as the public health is concerned, especially since England always takes great precautions to protect herself. A few months ago, protests were raised in France against the examinations imposed by the British sanitary authorities of New Haven, who did not hesitate to demand that women and young girls should undress, in order that it might be determined whether or not they were affected with venereal disease. An international convention of June 21, 1926, which Great Britain signed, together with other nations, provides, in article 42, that the signatories, in the event of smallpox, may prohibit the entrance, into their territory, of foreigners coming from contaminated countries, unless they can produce certificates in evidence of recent vaccination.

When smallpox was carried into England, two weeks ago, by passengers who disembarked from the *Tuscania,* returning from Bombay, and 200 cases developed in London alone, without considering the remainder of the country, the sanitary service of Dunkirk immediately put into force the provisions of article 42. The British, who found that their tours of the continent were thus seriously interfered with, protested loudly through diplomatic channels. M. Loucheur, the minister of health, at the instance of M. Briand, secretary for foreign affairs, yielded to importunity and ordered the suspension of the measures that caused inconvenience to travelers. He proposed, however, to the British authorities that a conference of hygienists of the two countries be held to determine what prophylactic measures should be taken. The French press protested, and the mayor of Havre (M. Meyer), who is also a member of parliament, paying no attention to the instructions of the minister of health, immediately issued an order prohibiting the disembarkation in Havre of Britishers who had not been vaccinated. At Marseilles, another British steamer, the *Ranchi,* also coming from Bombay, and having a case of smallpox on board, was refused by the mayor the privilege of landing any passengers who would not consent to be immediately vaccinated. The proposed conference did not meet for five days, during which time the British disembarked, in the main, as they saw fit, and in large numbers, many of them having left their country on account of the epidemic. Dr. Jules Renault, technical adviser of the minister of hygiene, and M. Nepoty, director of the ministry of hygiene, were the French delegates to the conference. Colonel Scott and Dr. S. Kurger were the British representatives. No understanding could be reached, and the British delegates requested the privilege of returning to London to receive the instructions of their government. Under these conditions, M. Loucheur, realizing that he had shown already too much patience, to the detriment of the interests that it was his duty to protect, issued an order that the regulations to which objections had been raised should be applied immediately without awaiting further action by the British. Certain modifications of the rulings were granted, however. Certificates of vaccination are accepted though they date back five years, whereas formerly an interval of three years had been fixed as the limit. The British who consented to accept vaccination were allowed to disembark immediately. The others were not permitted to continue their journey in France unless they were in possession of a yellow sanitary passport, which compels them to remain in their room, in the city of their destination, under medical supervision for fourteen days.

This system, which is strictly in accordance with regulations, is applied also by Denmark. These measures have resulted in diminishing considerably the number of arrivals from England, and the Southampton-Havre service has been greatly curtailed by the navigation companies, owing to the rapid decline in passenger traffic. At Calais, in place of 500, only 262 passengers arrived in one day. Of these, only seventy-eight possessed vaccination certificates. The others were examined and received the usual sanitary passport, which required considerable time, for which reason all trains out of Havre were several hours late. On the Havre route, several passengers allowed themselves to be vaccinated on board the steamer. The French government has sent a proposal to London to the effect that the examinations be made in the English ports before embarkation, or during the passage across the channel, which would simplify operations very much. The response is being awaited. It has been suggested also that vaccinations be carried out in India, before passengers embark for England. Thus far, only one case of smallpox has developed in France (an Englishman who arrived at Marseilles on the *Tuscania,* March 27, came down with the disease and was immediately isolated in the Hôpital des contagieux). Attention has been called to the unusual length of the incubation period in this epidemic of Hindu origin. In view of a possible epidemic in France, larger supplies of vaccine have been provided. British journals have protested and say that France should have consulted the international commission at Geneva before acting independently. To this criticism, the French press has replied that England did not consult Geneva before having the French passengers disrobe at New Haven, recently.

Diphtheria Prevention Week in France

This is the week set apart by the minister of health as diphtheria prevention week. All the newspapers have carried articles on diphtheria and preventive vaccination against the disease. Attention is called to the fact that the case mortality from diphtheria is still 15 per cent and that 3,000 patients died from the disease in 1928. Many talks were given over the radio. The address of M. Lereboullet was especially important. He reported the results that he had secured by the application of antidiphtheric vaccination with the Ramon

anatoxin at the Hôpital des Enfants-Malades. At the center for antidiphtheric prophylaxis, established in this hospital, 17,000 children have been vaccinated. These children came from many different strata of society and often from contaminated surroundings. No grave reactions followed vaccination. Only four cases of sore-throat were observed in children who received three properly spaced injections, but there were numerous cases (though mild) in those who had received only one injection. These observations support the view that antidiphtheric vaccination should be made general among all young children. Another center for antidiphtheric prophylaxis was established at Gournay, where more than 12,000 children were vaccinated in two years—either at the hospital or in the neighboring region.

The Crusade Against Cancer

Addressing the Academy of Medicine, recently, Prof. G. Roussy described the organization of the anticancer center of the suburbs of Paris, which differs from the administration of the other regional centers of France, being based on the principle of ferreting out cases and of dividing patients, according to the gravity of their condition, into several groups arranged in echelons. The center has been functioning for three years, and appears to have demonstrated its worth. In accordance with a ministerial decree dated Dec. 14, 1925, the center controls not only the suburbs of Paris but also the departments of Seine-et-Oise, Seine-et-Marne and Loiret. In the communes of the department of the Seine and the adjacent departments, the following installations have been made: (1) free anticancer consultation centers, reserved for the poor, which constitute the echelon for the ferreting out and selection of patients and (2) subcenters, which function in certain cities having hospitals and which constitute the intermediary echelon for the selection and treatment of patients. The consultation centers (also the subcenters) are in close communication with the main center at Villejuif. In the Paris suburbs, the consultation centers are open once a week, and in the communes of Suresnes-Puteaux, Boulogne-Billancourt, Saint-Ouen, Montreuil-sous-Bois and Vincennes, once in two weeks. The consultation centers are manned by medical specialists and assistants from the Centre anticancéreux de la banlieue parisienne, with the aid in certain cities—Boulogne, for example—of dispensary physicians. From these consultation centers, patients are referred, if necessary, to the main center at Villejuif, for a supplementary medical examination, a laboratory examination, or special treatment. In the departments of Seine-et-Oise, Seine-et-Marne and Loiret, in agreement with the prefects and the hygienic services, three subcenters have been created: at Orléans, Melun and Versailles, respectively. These subcenters comprise an outpatient consultation service, a surgical and a medical service, a radiotherapeutic service (semipenetrating or low voltage), and sometimes a curietherapeutic service. Several of these services are under the direction of former interns of the hôpitaux de Paris. Furthermore, in the principal cities of these departments anticancer consultation centers of the same type as those established in the Paris suburbs have been created and are manned by physicians from the cities in question. From the departmental centers for ferreting out cases, patients are referred to the subcenters or to the main center of the department of the Seine, depending on the needs of the patients themselves and also the available means of transportation. Such is the organization launched by M. Roussy with the aid of the prefects and the communal authorities, together with the moral and financial support of the general council of the Seine. The results of this organization are already visible. Patients are led to consult a physician much earlier, and treatment is begun much earlier, with better chances of success.

Evening Consultations in the Hôpitaux de Paris

The general administration of the Assistance publique has decided that consultation services in general medicine and general surgery shall be open, two evenings a week, in the Tenon and the Cochin hospitals.

BERLIN

(From Our Regular Correspondent)

April 27, 1929.

The Congress of the German Society of Internal Medicine

(Concluded from page 1780)

THE PATHOLOGIC ASPECTS AND THE TREATMENT OF TYPHOID BACILLUS CARRIERS

The next communications dealt with the pathologic aspects and the treatment of typhoid bacillus carriers. In the opinion of Prof. P. Krause of Münster, one must say, in every single case of typhoid, be on the watch for bacillus carriers. Most of these eliminate typhoid bacilli in the stools; less than a third, in the urine; eliminations of bacilli from the mouth are rare. The treatment is general: chemotherapy with an organic mercury compound and extirpation of the gallbladder. Schottmüller opposed extirpation of the gallbladder in cases in which the indications were not derived from considerations bearing on the life of the patient himself.

METABOLISM CENTER

Professor Grafe of Würzburg has been able, by means of the destructive effects of silver nitrate, to demonstrate the existence of a metabolism center in the vicinity of the corpora mamillaria. In dogs, if they survive the intervention, increase of weight and lowering of metabolism, with cerebral adiposity, occur. A more exact localization has not yet been demonstrated.

Hiller of Munich criticized the method for the demonstration of the sugar center in the medulla oblongata. Only when one eliminates the increase of blood sugar in ether narcosis, at the operation and in closure of the wound, does one get usable results; in puncture of the vagus, there is no particular increase; but puncture of the vestibular region does cause considerable increase. The large number of further communications on the second day of the congress must be passed over.

VALVULAR DEFECTS OF THE HEART

The papers of the following session dealt with valvular defects of the heart. Prof. H. Straub of Göttingen discussed the subject of dynamics. The measure of mechanical work is the effect of pressure on volume for a given time unit. The heart and the blood vessels constitute for the work of the heart a functional whole; but in this instance only the heart itself is to be considered. The amount of circulation is determined from without by the metabolism needs. The determination of the size of the heart and the pumping capacity are still very inexact—only rough estimates are obtainable. In incipient disturbances, any close estimation of the degree is still impossible. Not even by means of roentgenograms are the diastolic dilatations of the heart muscle in man exactly determinable. The orthodiagraphic changes represent in reality changes in the muscle rather than in the volume. The heart preserves its time-volume almost unchanged. With increasing pressure, there appears a clinically demonstrable incompleteness of evacuation; likewise, a shifting of blood in the pulmonary circulation. The reserve power of the heart is the capacity of the muscle to adapt itself to increasing external influences. The mode of regulation lies in the residuary volume. The dilatation caused thereby is no evidence of heart failure but is the prerequisite for the regulation, and thus is a form of compensation. Of the various

valvular defects, aortic stenosis must be marked before it attracts attention through change of functioning. Insufficiency of the aortic valve is the valvular defect in which compensation is easiest. It brings about acceleration of the pulse but hardly any increase of pressure. The dilatation that sometimes appears is not entirely the result of the valvular defect but is in part a muscular change. Mitral insufficiency shows simultaneously an increase of the pumping capacity with an increase of resistance. It brings about a shifting of the blood in the pulmonary circulation. Compensation is more difficult and is a heavy drain on the reserve force of the heart. Only a slight degree of mitral insufficiency can be compensated. In mitral stenosis, the pressure of the left auricle is increased. The diastolic ventricular pressure is only temporarily higher than normal. As a rule, in valvular defects the heart muscle is likewise injured. That leads, as in a healthy person, to drawing on the reserve force. In the presence of weakness of the heart muscle, the absolute maxima change, although there does not appear to be any change of the tonus. The minima of the heart whose performance is below normal are unchanged.

DECOMPENSATION OF ACQUIRED VALVULAR DEFECTS AND THE MODE OF TREATMENT

A decompensation is present only when the circulation no longer corresponds to the requirements of life. Quite distinct from that are disturbances of circulation due to injuries to the organism resulting from infections, following hemorrhages, and the like. Seven hundred and sixty acquired valvular defects observed in the Munich Clinic constituted about one third of the observed cases of organic heart disease. Decompensation may be based on lessened heart activity. The increased quantity of blood that is left behind in the case of incomplete contraction increases the tension of the heart wall and almost compensates for the disturbance by an increased contraction of the heart muscle. That explains the fact that the heart performance is independent of the existing dilatation, which may be demonstrated orthodiagraphically. On the rapidity of the onset of the disturbance and the cause of the valvular defect, depend the results with reference to the various portions of the heart in the presence of inadequate functioning of the heart. Possibly, in many heart disorders a diminished tonus plays a part, in which an influence of the vegetative system may be involved. The increase in the quantity of circulating blood in heart patients has been established. A portion of the blood circulates slowly in certain vascular regions; nevertheless, the quantity of blood that circulates more rapidly than normal brings the total above the norm. That signifies, in view of the low heart power, a further exacerbation of the circulation. Less frequently (more particularly in vasomotor weakness), the quantity of circulating blood is diminished. According to Eppinger, besides the mechanical changes in the circulation of the blood, a marked increase of lactic acid in the blood and other metabolic processes are of importance. But those are more the results of the modified heart activity than its cause. The duration of the compensation could be ascertained in only half of the endocarditic valvular defects. A third of the cases showed decompensation from the start, while a seventh were well compensated for more than twenty years. The syphilitic valvular disorders took a much more unfavorable course than the arteriosclerotic valvular defects. Cardiac dyspnea is better explained by the acidosis resulting from lactic acid. The cyanosis is due to dilatation of the cutaneous vessels.

Water metabolism was given a comprehensive discussion by Veil. Therapeutically, the removal of chronic pus foci and the persistent treatment of syphilis (also for the prevention of valvular defects) are urgently emphasized. In mild disturbances of heart power, carbonic-acid baths are recommended. For the regulation of perpetual arrhythmia, quinidine is recommended, if the heart action is satisfactory. The most important remedy is still digitalis; in acute cases, the intravenous injection of strophanthin, according to A. Fränkel. The action of digitalis is lessened in proportion as the heart is already enlarged. During the discussion, Professor von Krehl of Heidelberg stated that experiences with human beings do not correspond in all respects with the results of animal experiments. Even enlarged hearts are capable of extraordinary exertions. There is aortic insufficiency with a compensated heart and also with dilatation due to disturbance of tonus. Professor Eppinger of Freiburg recommended as treatment an appropriate massage, since it has been shown that in the working muscle a capillarization occurs which is lacking in patients with heart disease and which is very important in its influence on metabolic processes in the muscle. Massage is helpful possibly through the formation of small doses of histamine on pinching the skin, which exert a favorable influence on capillarization. Of course, massage may not be employed unless it fits in with the other modes of treatment that are being used. Jahn of Munich stated that, after intravenous injection of lactic acid, one observes in patients with heart disease without high blood pressure from 8 to 25 per cent increase of oxygen utilization. Also after the ingestion of dextrose, the excretion of sugar is increased. The disturbance does not appear to be a direct result of the disturbance in the circulation. According to the observations of Professor Wenckebach, Vienna, one finds in patients with beriberi swelling about the heart, lessened contractility but normal electrocardiographic showing. The heart muscle behaves in a manner similar to the skeletal musculature in avitaminoses. The heart muscle shrinks back to normal (to be sure, after some time) following the ingestion of food rich in vitamins. The swelling leads to an hypertrophy, which, however, must be treated differently (vitamin B) from a disturbance due to other causes. Professor Morawitz of Leipzig recommended as prophylaxis in threatened heart failure, daily 0.1 Gm. of quinidine base, in order to oppose the tendency to fibrillation. As a result, a marked decrease of fatal cases of heart failure was noted in the clinic, last year (a reduction of twenty-four down to five). Of the five fatal cases, in only one had quinidine been administered. Wollheim of Berlin distinguishes two forms of decompensation: one with increased quantity of circulating blood, and the other with a diminished blood volume. For the determination of the blood volume he recommends the use of dyes. Clinically, the two forms are distinigushed by the facts that in the first form the patient, in connection with dyspnea, prefers to be erect or to walk about; the cyanosis is confined to protruding points (nose, chin); there is a desire to sleep; the cervical veins are overfilled, especially in association with liver pressure, and the venous pressure is higher than normal. In this form, the peripheral effect of digitalis is desirable. In the second form, the dyspnea disappears if the patient lies down; the cyanosis is more general and venous pressure is low. In this form camphor and caffeine—also inspiration of carbon dioxide—are helpful.

The further extensive discussions and the numerous other clinical and experimental addresses contained little of general interest within the scope of our report.

Marriages

THOMAS JOSEPH BLACKSHEAR, JR., Wilson, N. C., to Miss Rosalie L. Robinson of Jacksonville, Fla., April 10.

WILLIAM HOWE FULLER to Miss Eloise Richardson Wright, both of Mayfield, Ky., March 20.

LOUIS FRANK to Miss Maude Lee Funk, both of Louisville, Ky., at New York, May 9.

BENJAMIN A. LEDBETTER to Miss Anna Bledsoe, both of New Orleans, May 8.

RITA KNOPF, Philadelphia, to Rev. Dan B. Bravin of Baltimore, April 22.

Deaths

Samuel Walter Kelley ⊕ Cleveland; Western Reserve University School of Medicine, Cleveland, 1884; chairman of the Section on Diseases of Children, 1900-1901, and member of the House of Delegates in 1902 of the American Medical Association; chief of the department of diseases of children at the dispensary of his alma mater, 1886-1893; professor of diseases of children, Cleveland College of Physicians and Surgeons, 1893-1910; served during the Spanish-American and World wars; member of the Central States Pediatric Society; past president of the Ohio State Pediatric Society and the Association of American Teachers of Diseases of Children; author of "In the Year 1800," "About Children," "Surgical Diseases of Children," and other books; aged 73; past president, secretary, and at one time on the staff of the Cleveland City Hospital; for many years on the staff of St. Luke's Hospital, where he died, April 20.

Charles Deady, New York; New York Homeopathic Medical College, 1876; at one time professor of otology, New York Medical College and Hospital for Women; formerly on the staff of the New York Ophthalmic Hospital; past president of the New York Academy of Medicine; editor of the *Journal of Ophthalmology, Otology and Laryngology,* 1889-1901; aged 78; died, in May, of heart disease.

Albert Barlow Hale, Rio Piedras, P. R.; Chicago Medical College, 1886; professor of economic geography, University of Porto Rico; associate clinical professor of ophthalmology, Rush Medical College, Chicago, 1901-1903; formerly commercial attaché to the American embassy at Buenos Aires and to the American legations of Uruguay and Paraguay; aged 68; died, April 30, of heart disease.

Robert Lincoln Murdy ⊕ Aberdeen, S. D.; Keokuk (Iowa) Medical College, 1892; Missouri Medical College, St. Louis, 1896; past president of the South Dakota State Medical Association; aged 59; on the staffs of St. Luke's Hospital and the Lincoln Hospital, where he died, April 30, of septicemia, following an abrasion.

William Boericke, San Francisco; Hahnemann Medical College of Philadelphia, 1880; formerly professor of materia medica, Hahnemann Medical College of the Pacific, and clinical professor of homeopathic materia medica, University of California Medical School; aged 79; died, April 1, of coronary sclerosis.

George Slonimsky, Philadelphia; Medico-Chirurgical College of Philadelphia, 1898; member of the Medical Society of the State of Pennsylvania; for eleven years medical inspector of the bureau of health; aged 56; died suddenly, May 13, of heart disease, while attending a patient.

Roderick J. McDonald ⊕ Leadville, Colo.; University of Michigan Medical School, Ann Arbor, 1895; president and at one time secretary of the Lake County Medical Society; mayor of Leadville; on the staff of St. Vincent's Hospital; aged 67; died, May 14, of pneumonia.

Edgar Jacob Lutz, Salina, Kan.; Baltimore University School of Medicine, 1886; member of the Kansas Medical Society; on the staffs of the Asbury Protestant Hospital and St. John's Hospital; aged 67; died, May 13, following perforation of the intestine.

Turner Fred Roberts ⊕ Paris, Texas; University of Louisville (Ky.) School of Medicine, 1898; proprietor of a hospital bearing his name; aged 54; died, in April, at St. John's Hospital, St. Louis, of heart disease following a prostatectomy.

Abram William Stoutenburg, Binghamton, N. Y.; New York Homeopathic Medical College and Hospital, 1894; aged 58; died, May 5, at the Binghamton City Hospital, of peritonitis, following rupture of the gallbladder.

Gaston De Foix Wilson ⊕ Spartanburg, S. C.; Kentucky School of Medicine, Louisville, 1891; served during the World War; on the staff of the Spartanburg General Hospital; aged 63; was killed, April 15, in an automobile accident.

William W. Halbert ⊕ Corsicana, Texas; Fort Worth School of Medicine, 1910; past president of the Cass County Medical Society; formerly on the staff of the Navarro County Hospital; aged 49; died, March 12.

Hugh Woodward Crouse, El Paso, Texas; Fort Wayne College of Medicine, 1892; member of the State Medical Association of Texas; past president of the El Paso County Medical Society; aged 59; died, April 21.

⊕ Indicates "Fellow" of the American Medical Association.

Harold Lowe Wallace, Boston; Tufts College Medical School, Boston, 1908; member of the Massachusetts Medical Society; served during the World War; aged 47; died, April 25, of injuries received when he fell from a third story window.

Frederick Dean Cartwright, Anna, Ky.; Vanderbilt University School of Medicine, Nashville, Tenn., 1900; University and Bellevue Hospital Medical College, New York,, 1901; aged 52; was found dead, May 10, in New York.

Charles Morton Merrill, Palm Beach, Fla.; Medical Department of the University of the City of New York, 1881; member of the Florida Medical Association; aged 72; died, February 21, of acute dilatation of the heart.

Leighton Payson Rand, Lanchow, Kansu, China; Cornell University Medical College, New York, 1921; head of the Boardman Memorial Hospital of the China Inland Mission; aged 33; died, in May, of typhus fever.

William Conyers Herring ⊕ Parsons, Kan.; Medical Department of the University of the City of New York, 1890; on the staff of the Mercy Hospital; aged 60; died, April 15, of angina pectoris and diabetes mellitus.

George N. Highley, Conshohocken, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1881; member of the Medical Society of the State of Pennsylvania; aged 69; died, March 9, of cerebral hemorrhage.

Harvey D. Van Gaasbeek ⊕ Sussex, N. J.; Medical Department of University of the City of New York, 1878; on the staff of the Alexander Linn Hospital; aged 72; died, April 20, of chronic myocarditis.

William A. T. Ryan, Dayton, Ohio; Jefferson Medical College of Philadelphia, 1906; member of the Ohio State Medical Association; on the staff of St. Elizabeth's Hospital; aged 45; died, in May, of pneumonia.

William A. Campbell ⊕ Colorado Springs, Colo.; Medical College of Ohio, Cincinnati, 1880; member of the American Climatological and Clinical Association; aged 72; died, in February, of coronary thrombosis.

Henry L. B'Shers, Little Rock, Ark.; University of Louisville (Ky.) School of Medicine, 1882; at one time county judge; formerly on the staff of the Confederate Home; aged 68; died, May 1, in a local hospital.

Oliver Raymond Minor ⊕ Manchester, Ky.; Kentucky School of Medicine, Louisville, 1903; aged 52; died, May 5, at the Methodist Episcopal Deaconess Hospital, Louisville, of stricture of the esophagus.

Silas W. Moreland, Jonesboro, Ark.; National University of Arts and Sciences Medical Department, St. Louis, 1886; member of the Arkansas Medical Society; aged 78; died, April 28, of heart disease.

Henry Forney Gilliland, Attalla, Ala.; Louisville (Ky.) School of Medicine, 1890; member of the Medical Association of the State of Alabama; aged 60; died, March 9, of pneumonia and heart disease.

Lester Laurens Roos, New York; Columbia University College of Physicians and Surgeons, New York, 1900; served during the World War; aged 48; died, May 12, at the Mount Sinai Hospital.

John H. Montgomery, Portland, Ore.; Columbus (Ohio) Medical College, 1891; member of the Oregon State Medical Society; aged 63; died, April 12, at Vancouver, Wash., of arteriosclerosis.

Morris D. Slattery ⊕ New Haven, Conn.; Yale University School of Medicine, New Haven, 1893; on the staff of the Hospital of St. Raphael; aged 61; died, May 7, of carcinoma of the bladder.

Eugene P. Taylor ⊕ Fairfax, Mo.; Louisville (Ky.) Medical College, 1888; past president of the Atchison County Medical Society; formerly mayor of Fairfax; aged 72; died. Dec. 28, 1928.

Albert Smith Brady ⊕ Greenup, Ky.; Miami Medical College, Cincinnati, 1892; for twenty-six years a member of the school board; aged 67; died suddenly, April 28, of heart disease.

John W. Bean, Ventura, Calif.; Jefferson Medical College of Philadelphia, 1882; member of the Washington State Medical Association; aged 70; died, March 22, of heart disease.

Henry Strong Durand, Rochester, N. Y.; Harvard University Medical School, Boston, 1888; aged 68; died, May 8, at the American Hospital, Paris, France, of heart disease.

John Sedwick Dorsey, Washington, D. C.; College of Physicians and Surgeons, Baltimore, 1890; aged 60; was found dead, April 23, of poison, presumably self-administered.

Alva D. Walker, Portland, Ore.; St. Louis Medical College, 1881; member of the Oregon State Medical Society; aged 74; died, March 30, of cerebral hemorrhage.

Joseph M. Coppage, Lepanto, Ark.; Memphis (Tenn.) Hospital Medical College, 1907; for many years bank president; aged 51; died, May 2, of tumor of the brain.

William H. Zehner, Allentown, Pa.; Jefferson Medical College of Philadelphia, 1895; aged 58; died, April 25, at the Allentown Hospital, following a nephrectomy.

Charles A. Tutt, Campbellsville, Ky.; Louisville National Medical College, 1899; served during the World War; aged 59; died, April 21, of cerebral hemorrhage.

Charles Richard Bechmann, Rock Island, Ill.; Rush Medical College, Chicago, 1896; aged 71; was killed, May 1, at Los Angeles, when struck by a street car.

Albert Tachauer ✠ Columbus, Ohio; Cleveland College of Physicians and Surgeons, 1898; aged 62; died, March 28, at the Grant Hospital, of acute cholecystitis.

Jefferson F. Wannamaker ✠ Vance, S. C.; University of Georgia Medical Department, Augusta, 1892; aged 63; died, March 27, of heart disease and nephritis.

William George Schoonover, Yonkers, N. Y.; Medical Department of the University of the City of New York, 1897; aged 54; died, May 6, of heart disease.

Louis Clifford Baribault ✠ Detroit; University of Montreal Faculty of Medicine, Montreal, Que., Canada, 1901; aged 54; died, April 16, of arteriosclerosis.

Amos L. B. Austell, Winchester, Tenn.; Vanderbilt University School of Medicine, Nashville, 1883; aged 84; died, February 6, of chronic nephritis.

Arthur Robert Fritz, Rochester, N. Y.; New York Homeopathic Medical College and Hospital, 1895; aged 56; died suddenly, April 26, of heart disease.

Damas B. Becker, New York; Cornell University Medical College, New York, 1905; aged 49; died, May 7, of acute edema of the larynx following influenza.

Almus Hugh Edwards, Louisville, Ky.; Medical Department University of Tennessee, Nashville, 1889; aged 62; died, May 4, of cerebral hemorrhage.

John Sloan Stewart, Mansfield, Ohio; Western Reserve University School of Medicine, Cleveland, 1877; aged 75; died, May 5, of cerebral softening.

James Lauback Hornbeck ✠ Catasauqua, Pa.; University of Pennsylvania School of Medicine, Philadelphia, 1895; aged 55; died, May 5, of myocarditis.

A. Henriques De Young ✠ Philadelphia; Jefferson Medical College of Philadelphia, 1880; aged 69; died, May 12, of carcinoma of the pharynx.

Wesley Launis Neville ✠ Lima, Ohio; Starling Medical College, Columbus, 1891; aged 61; died, May 8, at St. Rita's Hospital, of myocarditis.

Henry S. Havighorst, Toledo, Ohio; State University of Iowa College of Medicine, Iowa City, 1878; aged 71; died, May 5, of heart disease.

Marie Louise Turton, Brooklyn; New York Medical College and Hospital for Women, 1894; aged 65; died, May 1, of carcinoma of the colon.

Benjamin Franklin Rucker, Cleveland; Meharry Medical College, Nashville, 1916; aged 39; died, April 25, of congenital retroperitoneal hernia.

Frederick A. Wnorowski, Steeleville, Ill.; Hospital College of Medicine, Louisville, 1897; aged 62; died, May 2, of cerebral hemorrhage.

William Hugh Price ✠ Eldorado, Okla.; Birmingham (Ala.) Medical College, 1910; aged 49; died, April 27, of cerebral hemorrhage.

Elgin H. White, Rives, Tenn.; College of Physicians and Surgeons, Baltimore, 1891; aged 68; died, April 24, of cerebral hemorrhage.

Warren E. Day, Prescott, Ariz.; Albany (N. Y.) Medical College, 1863; Civil War veteran; aged 88; died, April 25, of senility.

Robert A. Hess, Fivepoints, Ohio; Medical College of Ohio, Cincinnati, 1895; aged 62; died, April 29, of heart disease.

Adelbert Lee Palmer ✠ Logansport, Ind.; Rush Medical College, Chicago, 1903; aged 50; died, May 3, of myocarditis.

George E. Hart, Clay, Ky.; Hospital College of Medicine, Louisville, 1898; aged 64; died, April 18, of heart disease.

Bureau of Investigation

MORE MISBRANDED NOSTRUMS

Abstracts of Notices of Judgment Issued by the Food, Drug and Insecticide Administration of the United States Department of Agriculture

Musser's Injection B. 500.—The Musser-Reese Chemical Company of Pittsburgh, Pennsylvania, shipped in November, 1927, a quantity of "Dr. Musser's Injection B. 500," which the federal authorities declared was misbranded. When analyzed by the government chemists, the preparation was found to consist essentially of boric acid and zinc sulphate in water, colored yellow with an artificial dye. The claims made for the preparation were declared false and fraudulent, and in February, 1928, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 15803; Issued April, 1929.*]

Sen-Gen-Ma.—The Nature Herb Company, Inc., of Seattle, Washington, shipped in December, 1927, a quantity of "Sen-Gen-Ma," which the federal authorities declared was misbranded. When analyzed, the preparation was found to consist essentially of a mixture of ground plant drugs, including senna, cascara and gentian, with baking soda. The product was

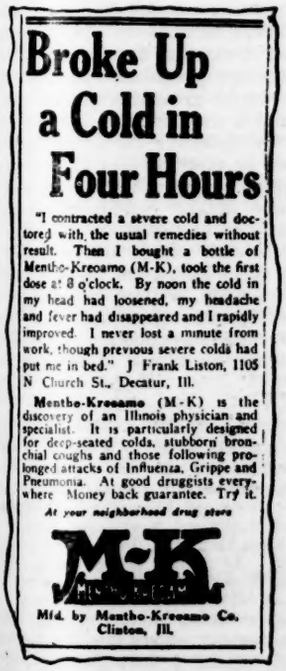
described on the trade package as an "Intestinal Cleanser," a "Tonic Laxative," "Nature's Remedy for All Blood and Skin Disorders, Constipation, Dyspepsia, and Acting as a General Tonic to the Entire System," and was said to be "For All Ailments of the Human Body, Including Constipation, Dyspepsia, Rheumatism, Asthma, Blood Purifier, Eczema and other Skin Diseases, Kidney, Bladder, and Liver Ailments." These and similar claims were declared false and fraudulent, and judgment of condemnation and forfeiture was entered. The court ordered that the product be destroyed.—[*Notice of Judgment 15805; Issued April, 1929.*]

Sal-Normal.—The Physio-Chemical Laboratories, Inc., of Salt Lake City, Utah, shipped in 1927 a quantity of "Sal-Normal," which the government officials declared was misbranded. When analyzed by the federal chemists, the preparation was founded to consist essentially of compounds of sodium, potassium, calcium and magnesium, including phosphates and carbonates and citric acid flavored with lemon oil. The label declared that it was a "Systemic Alkalinizer" and that it was "Highly efficient in the treatment of Acidosis, Vomiting of

Pregnancy, Nephritis, Rheumatism, Diabetes, Fevers and other toxemias," and "assists materially to neutralize Uric acid, Diacetic acid, Indican, Acetone, and Beta-Oxybutyric acid." These and similar claims were declared false and fraudulent, because the article contained no ingredient, or combination of ingredients, capable of producing such effects. In March, 1928, the Physio-Chemical Laboratories, Inc., admitted the allegations, judgments of condemnation and forfeiture were entered, and the court ordered that the product be released to the claimant on payment of the costs and the execution of a bond, conditioned in part that it be relabeled.—[*Notice of Judgment 15808; Issued April, 1929.*]

Neovigor Tablets.—The North American Drug Company of New York City shipped in September, 1927, to Porto Rico a quantity of "Compound Neovigor Tablets," which the federal authorities declared were misbranded. Analysis by the government chemists showed that Neovigor consisted essentially of sugar-coated pills containing chromium sulphate and phenolphthalein. The claims made for the preparation were of the usual type common to nostrums sold for "general debility," with the emphasis placed on "sexual debility." The claims were declared false and fraudulent and in April, 1928, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 15811; Issued April, 1929.*]

Mentho-Kreoamo.—The Mentho-Kreoamo Company of Clinton, Illinois, shipped in December, 1927, and February, 1928, a quantity of "Mentho-Kreoamo," which the federal authorities declared was misbranded: When analyzed, the preparation was found to consist essentially of ammonium chloride, wood tar, creosote, a trace of menthol, sugar and water. The preparation was so labeled as to give the impression that it was a remedy for influenza, pneumonia, bronchitis, whooping cough, bronchial irritation in the tuberculous, and other conditions. The claims were declared false and fraudulent and in June, 1928, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 15817; Issued April, 1929.*]


Broke Up a Cold in Four Hours
"I contracted a severe cold and doctored with the usual remedies without result. Then I bought a bottle of Mentho-Kreoamo (M-K), took the first dose at 8 o'clock. By noon the cold in my head had loosened, my headache and fever had disappeared and I rapidly improved. I never lost a minute from work, though previous severe colds had put me in bed." J Frank Liston, 1105 N Church St., Decatur, Ill.
Mentho-Kreoamo (M-K) is the discovery of an Illinois physician and specialist. It is particularly designed for deep-seated colds, stubborn bronchial coughs and those following prolonged attacks of Influenza, Grippe and Pneumonia. At good druggists everywhere. Money back guarantee. Try it.
At your neighborhood drug store
M-K
Mfd. by Mentho-Kreoamo Co. Clinton, Ill.

California Fig-Nuts Agar.—The West Side Warehouse, Chicago, Illinois, shipped in April, 1928, a quantity of so-called California Fig-Nuts Agar to Seattle, Washington. The government officials declared that the product was misbranded. When analyzed, California Fig-Nuts Agar was found to consist of baked and crumbled cereal product containing bran, wheat and traces of figs, nuts and agar. The claims on the trade package included such statements as:

"A Scientific Health Food."

"This food is recommended by leading physicians for those who are troubled with long standing chronic constipation. . . ."

"Lubricating the walls of the intestines, increasing the peristaltic action, and carrying this moisture to the lower bowel. . . ."

"Fig-Nuts Agar is semi-digested. It is thoroughly digested in 60 minutes."

The claims made for the preparation were declared false, misleading and fraudulent, and in June, 1928, judgment of condemnation and forfeiture was entered and the court ordered that the product be destroyed.—[*Notice of Judgment 15814; Issued April, 1929.*]

An-A-Cin.—The C. E. Jamieson Company, trading as the An-A-Cin Company from Detroit, shipped in May, 1928, a quantity of "An-A-Cin," which the government declared was misbranded. Analysis showed the product to consist essentially of acetphenetidin (phenacetine) and acetylsalicylic acid (aspirin), with small amounts of quinine sulphate and caffeine. The preparation was first declared misbranded, in that the declaration of the presence of acetphenetidin, as required by the law, was in type so inconspicuously placed and so small as not

S-S-SNEEZY!!
Hay-fever and Colds
Dull head-pains—fever—burning, itching eyes—excessive nasal discharge and other distressing symptoms of Hay Fever and Head Colds are promptly relieved by a tablet or two of the physicians' safe prescription AN-A-CIN.
AN-A-CIN—the scientifically balanced formula of non-narcotic remedies compounded to give prompt, safe, rational relief without affecting the heart or disturbing the stomach.
Clinically proven by physicians through ten years of constant use for adults of all ages.
This Handy Box 25¢
An-a-cin Also Relieves
Headache
Toothache
Earache
Influenza
Neuritis
Neuralgia
Rheumatism
AN-A-CIN
Stops Pain!

to comply with the requirements of the law. The therapeutic claims, that the product was for headache, toothache, earache, neuritis, neuralgia, colds and rheumatism, that it would not depress the heart and could be safely administered to children and invalids, that it had no untoward or ill effect or reaction—these, and others like them, were declared false and fraudulent, and in July, 1928, the An-A-Cin Company of Detroit, having admitted the allegations, judgment of condemnation and forfeiture was entered and the court ordered that the product be released to the claimant upon payment of the costs and the execution of a bond of $5,000, conditioned in part that the product be relabeled to conform to the law.—[*Notice of Judgment 15819; Issued April, 1929.*]

Prescription 999 Astringent Wash.—The Combination Remedy Company of Pittsburgh, Pennsylvania, shipped in the latter part of 1927 a quantity of "Prescription 999 Astringent Wash," which the government authorities declared was misbranded. When analyzed by the federal chemists, the preparation was found to consist essentially of boric acid and epsom salt, with a trace of artificial coloring. The claims made for the preparation were declared false and fraudulent and in March, 1928, judgment of condemnation and forfeiture was entered, and the court ordered that the product be destroyed.—[*Notice of Judgment 15813; Issued April, 1929.*]

The Exploitation of Mental Hygiene.—There is no doubt that we are remiss in not making greater efforts to develop the field of abnormal psychology. I am not unaware of the work of Lyman Wells, Bridges, Franz, and certain others. But on the whole, we have left the field to the psychiatrists, and they, leaving their field of the care of the mentally diseased, have moved boldly into the field of abnormal psychology. But, unfortunately, the psychiatrists have been little interested in acquiring either psychological knowledge or psychological technic. Hence we have a rampant development of theories and nostrums. Out of this has grown the exploitation of mental hygiene, which has already begun to have an unpleasant odor, as must any extensive attempt to apply what none of the appliers knows. There is probably no expanse of fiction as rich in imaginative products as is the mass of material being put before the public as mental hygiene. For this the psychologists must shoulder some of the responsibility, for it is evident that the situation cannot be cleared up until laboratory psychologists apply laboratory methods and psychological principles to research in this field.—Dunlap, Knight: The Outlook for Psychology, *Science*, Feb. 22, 1929.

Queries and Minor Notes

ANONYMOUS COMMUNICATIONS and queries on postal cards will not be noticed. Every letter must contain the writer's name and address, but these will be omitted, on request.

TREATMENT OF DEFORMITY DUE TO SCAR TISSUE IN PENIS

To the Editor:—A patient of mine, aged 53, has dorsal flexion of the penis during erection. There is about 60 degrees of flexion, which is not at all painful and in no way interferes with intercourse, except mechanically. The condition has been present over six months and is growing progressively worse. On examination in the flaccid state, the penis seems entirely normal. There is no swelling or induration along the top, or dorsal, side of the shaft or elsewhere. There is no difficulty of voiding urine. There has been no venereal disease. I will appreciate any suggestions as to cause, treatment or prognosis. Please use initials only.

M.D.

ANSWER.—A condition as described is due either to a cavernitis or to cicatricial changes in and under the urethral membrane. The results of palpation seem to exclude cavernitis. The presence of intra-urethral scar formation may be determined with the help of an olive-tipped sound and by urethroscopy. Scar tissue producing a chordee as a rule must be divided by internal urethrotomy.

EFFECT OF CHEWING COFFEE BEANS

To the Editor:—1. Could you tell me what the effects would be of chewing coffee beans every day? For instance, what harmful effects would come to a person who chews from ten to thirty coffee beans a day? 2. How many coffee beans as sold in the stores does it take to get a grain of caffeine? 3. Is chewing coffee beans worse than drinking coffee? Please omit name.

M.D., Massachusetts.

ANSWER.—1. None.
2. Perhaps fifty.
3. No.

TREATMENT OF NEUROSYPHILIS

To the Editor:—In answer to a query in THE JOURNAL, April 20, concerning the use of tryparsamide in neurosyphilis, I notice you state that "there are a variety of methods of treatment applicable to both systemic syphilis and neurosyphilis far superior to tryparsamide for the ordinary case and much less dangerous." Will you please tell me these methods of treatment referred to, and outline a routine for the treatment of early tabes? Please omit name.

M.D., Indiana.

ANSWER.—Tryparsamide seems to be of value only in the purely paretic type of neurosyphilis, in either the paresis sine paresi or the clinical phase. Those who have had experience with fever therapy by means of malaria inoculation or intravenous administration of typhoid vaccine are inclined to consider results from this treatment superior to those from tryparsamide. The occasional patient with paresis who is not physically able to tolerate fever therapy is a candidate for tryparsamide. The failures from tryparsamide therapy may be due to the fact that the patient's systemic syphilis is not controlled, and active flare-up of syphilitic processes (chorioretinitis, cerebral thrombosis) has been observed during tryparsamide treatment. Parenchymatous cerebral degeneration (general paresis) is not influenced by routine antisyphilitic measures alone and fever treatment or tryparsamide should be used as adjuncts. Tryparsamide should not be used in patients with tabes dorsalis or taboparesis on account of danger to the eyesight.

Therapy for syphilis consists of the administration of arsphenamine, iodides and mercury or bismuth or their compounds. As modified for a patient with early tabes dorsalis, it consists of daily intravenous injections of from 25 to 100 cc. of a 10 per cent solution of sodium iodide, and daily intragluteal injections of mercuric succinimide in 0.01 Gm. doses. Idiosyncrasy must be tested for by a few days' oral administration of potassium iodide before giving sodium iodide intravenously. If there are no signs of primary optic atrophy in the fundus oculi, arsphenamine may now be given in courses of six weekly injections. Three such arsphenamine courses at intervals of four months constitute the arsphenamine phase of treatment. An intragluteal injection of a bismuth preparation may be given between the arsphenamine injections. The intravenous solution of sodium iodide and intragluteal mercuric succinimide may be given for five weeks in the middle of the four month rest from arsphenamine. After three courses of arsphenamine, treatment may be continued by oral administration of potassium iodide and courses of bismuth given twice weekly for twenty injections at intervals of three, six and twelve months, and continued at yearly intervals, the duration to depend on the response. Most patients with early tabes dorsalis will respond to this treatment. If response is not satisfactory, intraspinal medication or fever treatment may be tried.

The essential difference of this regimen from that for latent syphilis is the intravenous administration of iodides. The intravenous administration of iodides as an adjunct to syphilitic therapy is discussed by Schwartz and Busman in the *American Journal of Syphilis* (**11**:51 [Jan.] 1927).

CONSENT TO OPERATIONS PRODUCING STERILITY

To the Editor:—A query in THE JOURNAL, April 20, page 1374, relative to the effects of a double vas ligation prompts these questions: Is there any legal liability in performing this operation? Should one secure a statement of authorization from a patient?

M.D., Pennsylvania.

ANSWER.—A person of mature years and sound mind can ordinarily give consent to an operation on himself. The parent of a minor can give consent to an operation on his child. The guardian of a person of unsound mind may authorize an operation on his ward. Except in the gravest emergency, no operation should be done without some such consent. The right to give such consent is limited, however, by the interest of the state in the welfare of its citizens. A person cannot subject himself, nor can a parent subject a child, nor a guardian his ward, to an operation that will jeopardize life without any adequate end in view. The state has an interest, too, not merely in the preservation of the individual but also in the perpetuation of its people through the bringing forth and the nurture of children. The same public policy that underlies laws to prevent contraception and criminal abortion applies to operations that produce sterility, even though that policy is not written in statutes specifically forbidding such operations. Because of the absence of such statutes and of court decisions bearing on the subject, the circumstances under which a person can give valid consent to an operation of this kind are not altogether clear. Consent is doubtless valid if the operation is necessary (1) to relieve or cure some existing disease or (2) to safeguard the life of the patient when pregnancy, because of some existing disease or defect, would gravely endanger her existence. Consent is probably valid if the operation is required to prevent the birth of diseased or defective offspring, when some existing transmissible disease or taint renders that result reasonably likely to follow conception. The validity of consent to operations not required by any of the conditions named would be at least open to question. In any case the physician, before proceeding with any operation that will produce sterility, should obtain from the patient, or from his parent or guardian, and from the spouse of a married patient, written consent in a form that shows that the patient, parent, guardian—and the spouse, if his or her consent is required—consents with full knowledge of the purpose of the operation and of its effects.

VIOLET COLORED DISCHARGE FROM A WOUND

To the Editor:—A man, aged about 31, was bitten by a dog in 1926, at which time the wound in the leg was opened wide and treated. The wound healed and the patient had no trouble until November, 1927, when he struck his leg with a nail above the ankle and below the original dog bite. He developed an open sore, which drained a prussian blue discharge for a while and then healed. Since then with the slightest injury to his skin of right leg it breaks down. At present he has three small areas discharging the prussian blue discharge. The man had worked in a lace mill and would come in contact with black lead. Formerly he worked in a rubber factory, where red oxide of mercury, sulphur and gas black were used a lot. He hasn't, however, worked in either factory for about eight months. The Wassermann reaction is negative. The urine and the blood count are normal. A culture of the discharge revealed no growth, and no fungi were seen. Kindly advise what is the possible cause and diagnosis. A roentgenogram of the leg was negative as far as bone involvement is concerned. Kindly omit name.

M.D., Connecticut.

ANSWER.—The theoretical conditions that might lead to a blue discharge from an indolent wound are:

1. Infection with *Bacillus pyocyaneus*, the sulphur group of bacteria or other pigment forming parasites, including fungi.
2. The ingestion or other forms of introduction of organic dyes, exposure to which may have been provided through industrial work or by accident.
3. Deliberate application of the blue or blue-forming materials by a patient as one aspect of malingering.
4. The accidental repeated application of some such clear solution as thymolphthalein, which clear solution in the presence of alkali turns a brilliant blue.

From theoretical considerations alone, it might seem that the blue discharge was caused by the production of blue pyocyanin, formed by *Bacillus pyocyaneus*. The sample of smeared gauze supplied by the correspondent reveals, however, intense pigmentation. The pigmentation on the gauze is due probably to

methyl violet or to some similar coal-tar dye. It is not reasonable to believe that any dye of this sort may have originated at work several months previously and have evinced no signs of its presence until this late time, and in no other way than a discharge from an alleged wound. Methyl violet would almost inevitably show up as a color in the urine. It seems highly probable that this methyl violet has been deliberately applied to the wound, but there is always the possibility of accidental application. Methyl violet might readily be obtained from indelible pencils.

COMPULSORY HOSPITAL SERVICE IN ILLINOIS

To the Editor:—Under the Illinois law, hospitals are obliged to render first aid to every patient who applies for it. Does the term "first aid" include after-treatment? In other words, is a patient, e. g., a patient with a laceration of the leg, which was sutured in the hospital by the physician on service, entitled to dressings, removal of stitches, etc., without paying the physician's fees? Is the doctor permitted to refuse to give after-treatment unless he is to be paid, and to direct the patient to a charitable institution for treatment?

M.D., Illinois.

ANSWER.—In Illinois, a hospital, either public or private, where surgical operations are performed, cannot lawfully refuse to give "emergency medical treatment or first aid" to any person who applies for it "in case of an accident or injury where the same shall be liable to cause death or severe injury" (Cahill's Illinois Revised Statutes, 1927, Chapter 38, Sections 352 [2] and 352 [3]). The courts have not yet construed this statute, which was enacted in 1917, nor have they defined "emergency medical treatment or first aid." The statute is not likely to be construed, however, as requiring a hospital to continue to give treatment after the patient is himself able safely to provide it through ordinary channels of professional practice and hospital service. Neither is it likely to be construed as compelling a hospital to give the required treatment and aid free, even during the period of the emergency. If it should be so construed, the statute would in effect require a hospital to expend its resources, without remuneration and recompense of any kind, for the benefit of any chance applicant for treatment who happens to be seriously injured, by accident or otherwise, and the statute would thus represent an attempt by the legislature, in contravention of the federal constitution, to take the property of the hospital without due process of law. It may be assumed, therefore, that, in order to maintain the constitutionality of the statute, the courts will hold that it does not relieve the patient of the obligation of paying for such services as he receives.

The statute places the duty of providing treatment or aid on the hospital, not on the physician. A physician who renders the required service does so, not because of any obligation imposed on him by law, but because of obligations to the hospital that he has voluntarily assumed. So long as the patient is an inmate of the hospital, the hospital must render such services as are necessary, including the removal of stitches and changes of dressing. If, after the patient has passed the emergency, the hospital desires to relieve itself of the duty of rendering any such service, it should see that he is properly transferred to his home or to some other suitable place, after affording him all necessary opportunities for making arrangements for treatment there.

Quite apart from the provisions of this statute, however, a physician who atends a patient in a hospital should always see that that patient, on being discharged, is given adequate instructions, if any are necessary, as to the special care that must be exercised by the patient after he leaves the hospital and as to the need for continuing under medical treatment. The physician who has attended a patient in the hospital is not obliged to follow him to his home, but it is advisable that he have a clear understanding with the patient with respect to the matter.

SENSITIVITY TO GRAINS AND POSSIBLE POISONING FROM COPPER

To the Editor:—Copper carbonate is used extensively here for "dry treatment" of grain before seeding. I see quite a number of asthmatic patients who date their first attack to a bronchitis following inhalation of the copper carbonate. Many of them fail to react to any foods or pollens by skin tests and have a negative nose and throat as far as infection is concerned. Can you explain the relation of this exposure to the ensuing asthma and give me an idea of a rational method of attacking these cases?

G. L. MCBEE, M.D., Pendleton, Ore.

ANSWER.—A search of recent literature fails to reveal any reference to the influence of copper carbonate on the lungs as a causative factor for bronchitis, asthmatic bronchitis or bronchial asthma.

It has long been known that many patients are sensitive to various grains, such as wheat, corn, oats, rye and rice. It is possible that the patients referred to might be sensitive to one or more of these even though skin tests are negative. It would be well to test the various derivatives as well as the whole grain—for example, patients frequently give negative skin tests to whole wheat but positive reactions to one or more of the individual proteins derived from whole wheat: wheat proteose, leukosin, gliadin, globulin and glutenin. If tests for these are negative, intracutaneous tests should be made with various dilutions up to 1:500. If these are negative, powdered wheat, corn or other grain should be inhaled. By these methods, a sensitization that does not exist in the skin may sometimes be picked up.

Copper poisoning is an entirely different condition and is shown by vomiting, constipation or diarrhea, abdominal pains and often prostration. Asthma has not been described as a result of copper poisoning.

DIATHERMY IN ARTHRITIS DEFORMANS

To the Editor:—I have been asked whether a treatment of an old arthritis deformans by means of intravenous injections of some formic acid preparation followed by the use of diathermy is justified. A woman, aged about 55, has been suffering from the disease for about twenty-five years. I understand that the nonspecific treatment of arthritis deformans has given rise to serious reactions in a number of cases. As this question lies outside my special knowledge, I would like to have your advice in the matter. Please omit name.

M.D., Ohio.

ANSWER.—Many years ago there was a popular idea that "bee stings" helped rheumatism. Homer Swift of the Rockefeller Institute tried formic acid injections with negative results. Some severe reactions have occurred following the use of salts of orthoiodoxybenzoic acid. Arthritis deformans is the terminal stage of infectious arthritis, and treatment by protein shock has in general been futile. Diathermy has been of benefit in selected cases.

TREATMENT OF BURNS WITH TANNIC ACID

To the Editor:—Please send me the technic of treating burns with tannic acid.

H. A. GALLUP, M.D., San Luis Obispo, Calif.

ANSWER.—The patient is given a relatively large dose of morphine sulphate hypodermically (an average adult, 0.015 Gm.) to alleviate the intense pain. The burned area is covered with dry sterile gauze pads, which are held in place by sterile gauze bandages. This dressing is then soaked with a 2.5 per cent aqueous solution of tannic acid and permitted to remain for from twelve to twenty-four hours. As this is sometimes difficult to remove without trauma, requiring soaking with fresh tannic acid solution, the suggestion of Stanley J. Seeger of spraying the solution over the affected area every half hour, until a brown or black crust has formed, is of interest. After the compress is removed, or, if the spray is used from the beginning, the wound is exposed to the air but carefully protected from mechanical injury, chilling and bacterial invasion by a suitable cradle draped with sterile linen, and artificial heat is supplied by placing within the cradle so prepared one or more ordinary electric light bulbs. It is essential that the tannic acid solution be made up fresh just before use, because it deteriorates on standing, with the formation of the far less astringent gallic acid.

HEAD NOISES DUE TO INCREASED BONE CONDUCTION

To the Editor:—Please tell me the significance, if any, of a bruit, synchronous with the pulse, to be heard in both ears by using the ordinary listening tube used when doing a Politzer inflation. The right ear has a chronic adhesive process; the left ear does not. The patient, a woman, aged about 30, complains of frequent sick headaches and pains about the right ear, some disturbance of hearing, and noises like a pulse beat in the ears, the right especially. The bruit can be easily counted, the same as the pulse. Her family physician has found no cause for headaches and she states that he has found her systolic blood pressure about 14 points too low. Please omit name.

M.D., Illinois.

ANSWER.—It frequently happens that noises synchronous with the pulse can be heard in the ears, especially when the external auditory canal is occluded with the finger, or, as in this case, with the end of a hearing tube. When there is a chronic adhesive process or any other involvement of the middle ear, bone conduction is usually increased, and therefore the sounds described are heard louder than at other times. This is of no significance except that it usually shows that the bone conduction is increased. Of course, other sounds in the ear may be due to hypertension, pressure on blood vessels, anemia, or other conditions. It is doubtful whether the headaches described are due to the adhesive process in the middle ear. Headache is only a symptom and therefore a complete examination of the body should be made in order to see whether some local process in the nose, sinuses or teeth may be the cause, or whether some systemic condition is the underlying factor.

TECHNIC FOR MAKING FINGER PRINTS

To the Editor:—Would it be possible to obtain in English the technic employed by E. D. Schött in making finger prints? The article originally appeared in the *Upsala Läkareförenings Förhandlingar* (**33**: 347 [Oct. 10] 1927) and was abstracted in THE JOURNAL, Dec. 24, 1927, page 2234.

CLARENCE A. HILLEGASS, Los Angeles.

ANSWER.—Schött perfected his cosmetic photographic method because the application of printers' ink was not liked by the persons examined. He found in hydrous wool fat a fatty substance which has the advantage of being tough; it does not run, and solutions pass through it very slowly. The taking of the hand prints was done according to the usual methods, only, hydrous wool fat was substituted for the printers' ink, and instead of paper Schött employed photographic developing paper, films or plates. The fact that old photographic material may be used makes the method less expensive. The following technic may be employed: 1. A thin, even layer of hydrous wool fat of 0.1 mm. thickness is applied by means of a perfectly dust-free rubber cylinder, to a plate-glass pane measuring 24 by 24 cm. Care should be taken that the glass is absolutely clean. This thin layer of hydrous wool fat should not contain any granulation but should be dull, even and smooth as a mirror. The quantity of hydrous wool fat should be adapted not only to the texture of the skin of the person who is to be examined but also to the sensitiveness of the photographic material. 2. The hand or finger is pressed on this layer of hydrous wool fat, but care should be taken to avoid displacement. 3. The same procedure is repeated, with the hand or finger on the sensitive side of the film. The film should have a solid support, and the hand or finger should be carefully lifted off. This manipulation may be done in daylight. The film is numbered and then put away in a box so as to be protected against light. On one of the following days it is developed. 4. The developing may be done in daylight with rodinal, 1:10. Care should be taken that the number is not wiped out. 5. It is then washed in an acid water-bath. 6. Following this it is placed in an acid fixing bath. After from ten to fifteen minutes the hydrous wool fat should be carefully removed by means of a wet pledget of cotton wadding. The picture is then placed again in the fixing bath. 7. It is rinsed and dried, and cleaned with a dry pledget of cotton wadding. 8. A print is made on glossy tinted paper. The advantage of this method is that a hand or finger print may be made in a few minutes. Because the person who is examined soils neither hand nor garments, no troublesome cleaning is necessary.

PREPARATION OF BONES OF ANIMALS FOR MUSEUMS

To the Editor:—I am seeking some method of removing tissue and fats from bone and bleaching the latter without destroying it.

J. PALMERI, M.D., Kansas City, Mo.

ANSWER.—The skeleton is made reasonably free from the soft parts by dissection. The skull may be sawed across horizontally and the top removed to facilitate removal of the brain. If it is desired to preserve the skull intact, it may be disarticulated and the brain removed through the great foramen at the base with little additional work. The large bones are disarticulated and the small bones of each wrist and ankle are placed in small separate sacks to keep them together.

The bones are now boiled in a solution containing for each liter of water 30 Gm. of potassium carbonate and 15 Gm. of sodium sulphide. The boiling will require a few hours, longer if the bones are large than if they are small. They should be watched, as prolonged boiling will result in their disintegration. The process will be expedited if they are brushed with a brass brush from time to time to remove the soft structure.

When the bones are free from all soft parts they should be rinsed, allowed to lie a few minutes in "ammoniated water" and then allowed to soak in warm, soft water several hours to remove the sodium sulphide. They should then be dried and bleached in the sun. If much grease remains in the bones, it can be removed by soaking them in calcium tetrachloride and rinsing in ammoniated water. This can be expedited by warming the water. If the bones are not sufficiently white, they can be bleached to an ivory whiteness by placing them in equal parts of water and solution of hydrogen peroxide. This may require a few hours or a few days. At the end of the process, exposure to the sun will make the surface uniformly white. Better results are obtained throughout if during the heating processes the temperature is kept just below the boiling point.

The process outlined is recommended by Mr. John Rowley of the American Museum of Natural History and will be found to give excellent results.

Medical Education, Registration and Hospital Service

COMING EXAMINATIONS

ALABAMA: Montgomery, July 9-12, 1929. Chairman, Dr. J. N. Baker, 519 Dexter Avenue, Montgomery, Ala.

AMERICAN BOARD OF OPHTHALMIC EXAMINERS: Portland, Ore., July 8, and Philadelphia, Oct. 21. Sec., Dr. William H. Wilder, 122 South Michigan Avenue, Chicago.

ARIZONA: Phoenix, July 2, 1929. Sec., Dr. H. P. Mills, 320 Goodrich Building, Phoenix, Ariz.

CALIFORNIA—Reciprocity: San Francisco and Los Angeles, June 12. Sec., Dr. Charles B. Pinkham, 420 State Office Bldg., Sacramento, Calif.

CALIFORNIA: Los Angeles, July 8-11, 1929. Sec., Dr. Charles B. Pinkham, 420 State Office Building, Sacramento, Calif.

CALIFORNIA: San Francisco, July 15-18, 1929. Sec., Dr. Charles B. Pinkham, 420 State Office Building, Sacramento, Calif.

CONNECTICUT—Basic Science: New Haven, June 8. Address State Board of Healing Arts, 1895 Yale Station, New Haven, Conn.

DELAWARE—Regular and Homeopathic: Wilmington, June 10-12. Sec., Dr. Harold B. Springer, 1013 Washington Street, Wilmington, Del.

FLORIDA: Jacksonville, June 17-18, 1929. Sec., Dr. William M. Rowlett, 812 Citizens Bank Building, Jacksonville, Fla.

GEORGIA: Atlanta and Augusta, June 5-7. Sec., Dr. B. T. Wise, Americus, Ga.

HAWAII: Honolulu, July 8, 1929. Sec., Dr. James A. Morgan, Room 48, Young Building, Honolulu, Hawaii.

ILLINOIS: Chicago, June 25-28. Supt. of Registration, Mr. V. C. Michels, Springfield, Ill.

INDIANA: Indianapolis, June 25-27. Sec., Dr. E. M. Shanklin, 421 State House, Indianapolis, Ind.

IOWA: Iowa City, June 4-6. Director of Examinations, Mr. H. W. Grefe, Iowa Department of Health, Des Moines, Iowa.

KANSAS: Kansas City, June 18, 1929. Sec., Dr. Albert S. Ross, Sabetha, Kan.

KENTUCKY: Louisville, June 11-13. Sec., Dr. A. T. McCormack, 532 W. Main Street, Louisville, Ky.

LOUISIANA: New Orleans, June 13-15. Sec., Dr. Roy B. Harrison, 1507 Hibernia Bank Building, New Orleans, La.

MARYLAND: Baltimore, June 18-21. Sec., Dr. Henry M. Fitzhugh, 1211 Cathedral Street, Baltimore, Md.

MARYLAND—Homeopathic: Baltimore, June 11. Sec., Dr. J. S. Garrison, 517 Old Orchard Road, Ten Hills, Baltimore, Md.

MICHIGAN: Ann Arbor, June 11-13. Detroit, June 19-21. Sec., Dr. Guy L. Connor, 707-708 Stroh Building, Detroit, Mich.

MISSOURI: St. Louis, June 12-14. Sec., Dr. James Stewart, Capitol Building, Jefferson City, Mo.

NEBRASKA: Omaha, June 10-12. Chief, Mrs. Clark Perkins, Bureau of Examining Boards, Lincoln, Neb.

NEW JERSEY: Trenton, June 18-19. Sec., Dr. Charles B. Kelley, 1101 Trenton Trust Building, Trenton, N. J.

NEW YORK: New York, Albany, Syracuse and Buffalo, June 24-27. Chief, Mr. Herbert J. Hamilton, Educational Building, Albany, N. Y.

NORTH CAROLINA: Raleigh, June 24. Sec., Dr. John W. MacConnell, Davidson, N. C.

NORTH DAKOTA: Grand Forks, July 2-5, 1929. Sec., Dr. G. M. Williamson, Grand Forks, N. D.

OHIO: Columbus, June 3-6. Sec., Dr. H. M. Platter, 85 East Gay Street, Columbus, Ohio.

OREGON: Portland, July 1-3, 1929. Sec., Dr. Joseph F. Wood, Suite 510-512 Selling Building, Portland, Ore.

OTOLARYNGOLOGY: Portland, Ore., July 8, 1929. Sec., Dr. W. P. Wherry, 1500 Medical Arts Building, Omaha, Neb.

PENNSYLVANIA: Philadelphia and Pittsburgh, July 9-13, 1929. Dir., Mr. C. D. Koch, Harrisburg, Pa.

SOUTH CAROLINA: Columbia, June 25. Sec., Dr. A. Earle Boozer, 505 Saluda Ave., Columbia, S. C.

SOUTH DAKOTA: Rapid City, July 16, 1929. Dir., Dr. H. R. Kenaston, Bonesteel, S. D.

TENNESSEE: Memphis, Nashville and Knoxville, June 14-15. Sec., Dr. Alfred B. DeLoach, Medical Arts Building, Memphis, Tenn.

TEXAS: Austin, June 18-20. Sec., Dr. T. J. Crowe, 918-919 Mercantile Bank Building, Dallas, Texas.

VERMONT: Burlington, June 19-21. Sec., Dr. W. Scott Nay, Underhill, Vt.

VIRGINIA: Richmond, June 18-21. Sec., Dr. J. W. Preston, 720 Shenandoah Life Building, Roanoke, Va.

WASHINGTON-BASIC SCIENCE: Seattle, July 11-12, 1929. Dir., Mr. Charles Maybury, Olympia, Wash.

WASHINGTON: Seattle, July 15-17, 1929. Dir., Mr. Charles Maybury, Olympia, Wash.

WISCONSIN—Basic Science: Milwaukee, June 24. Sec., Prof. Robert N. Bauer, 3410 Wisconsin Ave., Milwaukee, Wis.

WISCONSIN: Madison, June 25-27. Sec., Dr. Robert E. Flynn, 315 State Bank Building, LaCrosse, Wis.

North Dakota January Examination

Dr. G. M. Williamson, secretary of the North Dakota State Board of Medical Examiners, reports the oral, written and practical examination held at Grand Forks, Jan. 1-4, 1929. The examination covered 13 subjects and included 100 questions. An average of 75 per cent was required to pass. Of the 10 candidates examined, 8 passed and 2 failed. Two physicians were licensed through reciprocity with other states. The following colleges were represented:

PASSED	Year Grad.	Per Cent
Rush Medical College	(1928)	81
Northwestern University Medical School	(1923)	77
University of Minnesota Medical School	(1928)	76.2, 85

University of Manitoba Faculty of Medicine	(1928)	81, 82
University of Toronto Faculty of Medicine	(1919)	82
University of Geneva, Switzerland	(1922)*	78.3

FAILED

University of Illinois College of Medicine	(1903)	70
University of Nebraska College of Medicine	(1923)	69

LICENSED BY RECIPROCITY

College	Year Grad.	Reciprocity with
Northwestern University Medical School	(1920) (1926)	Illinois

* Verification of graduation in process.

Oregon January Examination

Dr. Joseph F. Wood, secretary of the Oregon State Board of Medical Examiners, reports the written examination held at Portland, Jan. 3-5, 1929. The examination covered 11 subjects and included 106 questions. An average of 75 per cent was required to pass. Of the 11 candidates examined, 8 passed and 3 failed. Twelve physicians, including 3 osteopaths, were licensed through reciprocity with other states and 5 by endorsement of credentials. The following colleges were represented:

PASSED

College	Year Grad.	Per Cent
State University of Iowa College of Medicine	(1928)	85
University of Oregon Medical School	(1927) (1928)	88.9, 81.8, 82.7, 83, 84, 84.9
Temple University School of Medicine	(1928)	82.6

FAILED

University Medical College of Kansas City	(1893)	37
Kansas City Hahnemann Medical College	(1909)	68
Baylor University College of Medicine	(1915)	73

LICENSED BY RECIPROCITY

College	Year Grad.	Reciprocity with
University of California Medical School	(1924) (1927)	California
University of Colorado School of Medicine	(1925)	Colorado
University of Louisville School of Medicine	(1921)	Montana
Washington Univ. Sch. of Med.	(1924) W. Virginia, (1925)	Missouri
St. Louis University School of Medicine	(1917)	Missouri
Creighton University School of Medicine	(1927)	Nebraska
University of Oregon Medical School	(1925)	California
Osteopaths		Missouri, Nebraska, Vermont

LICENSED BY ENDORSEMENT

College	Year Grad.	Endorsement with
Johns Hopkins University School of Medicine	(1924)	N. B. M. Ex.
Harvard University Medical School	(1925), (1926)	N. B. M. Ex.
University of Oregon Medical School	(1927) (2)	N. B. M. Ex.

Book Notices

ERYTHEMA NODOSUM. By J. Odery Symes, M.D., Consulting Physician to the Bristol General Hospital. Cloth. Price, $2. Pp. 72, with 8 illustrations. New York: William Wood & Company, 1928.

In this brief but complete monograph the author records his observations on 250 cases of erythema nodosum seen during a period of thirty years. The clinical phenomena are minutely described and the differentiation from erythema multiforme and from allergic and anaphylactic conditions is considered. As regards etiology the author is unable to confirm Rosenow's finding of a specific organism, and the pathologic changes are interpreted as evidence of toxemia rather than bacillemia. The disease proc s is held to be a definite clinical entity, an acute specific disorder, in no way related to acute rheumatism. The continental view that erythema nodosum, especially in children and young adults, is related to tuberculosis receives some confirmation from the author's series. In nineteen cases out of 102 (18.6 per cent) tuberculosis was definitely demonstrated at the time of or succeeding the eruption. The therapeutic recommendations are along traditional lines. The monograph is well worth a careful study by any one interested in this disease.

SONDERBÄNDE ZUR STRAHLENTHERAPIE. Herausgegeben von Professor Dr. Hans Meyer. Band XI: Die Lichterkrankungen der Haut. Von Prof. Dr. Hausmann, und Priv.-Doz. Dr. H. Haxthausen. Paper. Price, 12 marks. Pp. 130, with 34 illustrations. Berlin: Urban & Schwarzenberg, 1929.

This publication is in keeping with the best traditions of the Copenhagen school, and is comprehensive and authoritative. The first section summarizes the scientific facts relating to the physics and biology of light and the subject of light disorders in general. The second section considers the action of light on the normal skin, the pathogenesis and histology of light erythema, and the chronic light effects. The third section is devoted to the action of light on the pathologically light-sensitive skin. Here is found a discussion of the various forms of hydroa estivale and their relation to hematoporphyrinuria, the chronic polymorphous light eruption described by Hutchinson as summer prurigo, the rôle of light in pellagra and xeroderma pigmentosum, and medicamentous sensitization of the skin. In the last section are some interesting observations on the group of skin diseases which are aggravated by light or occasionally produced by it. Among these are epithelioma, acne vulgaris, eczema, erythema multiforme, lupus erythematosus, psoriasis, acne rosacea, toxic exanthems and urticaria. The rôle of light in the pathogenesis of some of these disorders, such as acne vulgaris, erythema multiforme and psoriasis, may properly be questioned. On the other hand, it is a matter of common observation that exposure to any kind of rays will often cause a serious exacerbation of a quiescent lupus erythematosus or will precipitate an attack of urticaria. In these days of indiscriminate, not to say hectic, light therapy, much of it unscientific and relegated to laymen, careful thought must be given to the possible harmful effect of light exposures as brought out by the authors. It is to be hoped that a translation into English will make the information contained in this volume available to a larger medical audience.

LA RÉSERVE ALCALINE. Par L. Ambard, professeur a la Faculté de médecine de Strasbourg, et F. Schmid, chef de laboratoire à la Faculté de médecine de Strasbourg. Paper. Price, 18 francs. Pp. 155, with 3 illustrations. Paris: Gaston Doin & Cie, 1928.

This monograph does not purport to be a summary of the entire question of the alkali reserve, but it is limited to certain problems with which the authors have been engaged. In their introduction the authors state the major premise of their work, which is that hydrochloric acid is neutralized in the circulation by direct combination with the proteins of the blood and especially with hemoglobin. Their theoretical treatment of the subject is therefore diametrically opposed to that of Henderson, Van Slyke and other modern workers, who have long since and on good grounds discarded this possibility. This study may be read by any one who wishes to pursue the matter further.

SURFACE ANATOMY. By Arthur Robinson, M.D., F.R.C.S., Professor of Anatomy in the University of Edinburgh, and E. B. Jamieson, M.D., Lecturer of Anatomy in the University of Edinburgh. Cloth. Price, $6. Pp. 175, with 38 illustrations. New York: William Wood & Company, 1928.

This is a clear statement of what may be seen and felt by direct examination of the body. It is intended for the use of students and practitioners who are already familiar with underlying structures through work in the dissecting room. Each of the seven sections into which the book is divided deals with one part of the body, stating first what may be seen by visual examination and afterward what may be seen and felt of deeper structures in the following order: bone, muscles, arteries, veins, lymphatics, nerves, viscera, with their special vessels and nerves. Thirty-two of the illustrations are new, and six are taken from Cunningham's Manual of Dissection. The same author, artists and publishers have collaborated on these two books. It is an excellent book, covering its field with unusual thoroughness. It will be useful as a review of anatomy and as a help in physical diagnosis and clinical examinations.

THE CARE OF THE CHILD. By Alton Goldbloom, B.A., M.D., Lecturer in Pediatrics, McGill University. Cloth. Price, $1.50. Pp. 240, with illustrations. New York: Longmans, Green & Company, 1928.

In recent years a large number of books have been written for mothers describing the development, care and feeding of the child. Such books have varied in usefulness in proportion to the simplicity of their styles and clearness of expression. This book has been prepared in order to meet the thousand and one questions that constantly spring up in the mother's mind. It serves as a supplement to the physician's efforts and relieves him of the burden of supplying the answers for those questions which, although not vitally concerned with the baby's health, are still a source of worry to the mother. The material is presented in such a fashion as to make it readable and interesting. There are short but important sections concerning the use of sunlight and the abuse of laxatives. Hygiene, breast and artificial feeding, growth and development, care of the sick baby, child training and habits are well discussed. This is one more manual for mothers, but it is a good one.

HANDBUCH DER PATHOGENEN MIKROORGANISMEN. Herausgegeben von W. Kolle, R. Kraus und P. Uhlenhuth. Lieferung 26, Band IX. Die Tierpocken. Von Dr. St. Zurukzoglu. Influenza der Pferde (Pferdestaupe). Von Prof. Dr. W. Zwick. Die Brustseuche des Pferdes. Von Prof. Dr. W. Zwick. Die Blutfleckenkrankheit des Pferdes, Morbus maculosus equorum. Von Prof. Dr. W. Zwick. Leukämie der Säugetiere und des Geflügels. Von Prof. Dr. P. Knuth. Bläschenausschlag bei Pferd und Rind. Von Prof. Dr. W. Zwick. Die praktisch witchtigen Spontaninfektionen der Versuchstiere. Von Dr. F. Gerlach. Infektionskrankheiten der Pflanzen. Von Prof. Dr. H. Klebahn. Third edition. Paper. Price, 24 marks. Pp. 357-564, with 72 illustrations. Jena: Gustav Fischer, 1928.

This issue, devoted as it is to diseases of the lower animals and of plants, contains nevertheless much material of great interest to human medicine. Zurukzoglu discusses in a clear and well documented article the relation of the various animal "poxes" to one another and to human smallpox. The close relationship, if not identity, of fowlpox with the mammalian disease is strongly emphasized by the author. The poxlike diseases of fish and other cold-blooded animals are, on the other hand, regarded as of a different class. Zwick, who writes on "equine influenza," does not take any more seriously than do most recent investigators the scattered statements and conjectures that this disease is identical with human influenza. Many readers will wish that Gerlach had given a less perfunctory discussion than he does of the more important spontaneous infections of the animals commonly used for experimental purposes. The chapter on infectious diseases of plants is also somewhat sketchy, less than a page and a half being given to the virus diseases of plants.

ANTE-NATAL CARE: A Practical Handbook of Ante-Natal Care and of the Abnormalities Associated with Pregnancy. By W. F. T. Haultain, O.B.E., M.C., B.A., Senior Assistant Obstetric Physician, Edinburgh Royal Maternity and Simpson Memorial Hospital, and E. Chalmers Fahmy, M.B., F.R.C.S., Assistant Obstetric Physician and Special Assistant to Ante-Natal Department, Edinburgh Royal Maternity and Simpson Memorial Hospital. With foreword by Professor R. W. Johnstone, C.B.E., M.A., M.D., Professor of Midwifery and Diseases of Women, University of Edinburgh. Cloth. Price, $2.25. Pp. 113, with 2 illustrations. New York: William Wood & Company, 1929.

The importance of adequate antenatal supervision is being recognized more and more. In the United States this branch of obstetrics has been repeatedly emphasized for many years by all the teachers of obstetrics. In England, on the other hand, prenatal care has been extensively considered only during the last few years, in spite of the fact that J. W. Ballantyne was one of the early pioneers in the movement for antenatal care. It is therefore gratifying to see this book emanate from the Edinburgh school with which Ballantyne was connected for many years. The book contains much helpful information. The authors take up the diagnosis and hygiene of pregnancy, the examination of patients, and the diagnosis and treatment of numerous complications of pregnancy. A special chapter is devoted to pain, and another to venereal diseases during pregnancy. Unfortunately there is not a single illustration in the book other than a plan of the antenatal department of the Edinburgh Royal Maternity Hospital. In spite of this, the book should be of great help to all general practitioners. A careful study of its contents will undoubtedly help to reduce the number of maternal deaths due to preventable causes.

THE DISEASES OF CHINA INCLUDING FORMOSA AND KOREA. (Jefferys and Maxwell). By James L. Maxwell, M.D., B.S. Second edition. Cloth. Price, $5. Pp. 530, with 176 illustrations. Shanghai, 1929.

The first edition was published some years ago, and the second edition now appears from the pen of the junior author of the first, the senior author having retired from China. The work is not a substitute for the standard treatises on tropical medicine. It is broader in its scope, and at the same time more intimate, being based largely on the personal experience of the authors. It is frankly an adjunct to the more complete textbooks of general medicine and surgery, and is intended primarily to give to the physician practicing in China accurate knowledge concerning those diseases peculiar to the Far East about which little is said in American and European texts, and about which that little is often wrong. The book is invaluable to the physician just beginning his medical work in China, and is also useful for reference to the physician who only occasionally encounters tropical disease. For the latter reason it should be generally adopted for medical libraries in this country. The illustrations are largely concerned with medical monstrosities and may give the impression that they represent the average of cases seen in China. If one avoids gaining this impression, however, they are useful as indicating the extent to which disease may progress when allowed to go untreated.

PUBLIC HEALTH AND HYGIENE: A Student's Manual. By Charles Frederick Bolduan, M.D., Director, Bureau of Health Education, Department of Helath, City of New York. Cloth. Price, $2.75 net. Pp. 312, with 122 illustrations. Philadelphia: W. B. Saunders Company, 1929.

This is a readable, well arranged and generally accurate little book. The historical sense with which the author is gifted has proved especially valuable to him in the selection and presentation of his material. Illustrations are numerous and mainly well chosen. It is perhaps inevitable that a few misstatements and errors should find their way into a book of this character. Ricketts is said (p. 126) to have died from Rocky Mountain spotted fever (instead of from typhus). The yellow fever mosquito has been known for at least five years as *Aedes aegypti* (not *A. calopus,* p. 135). On page 143 the impression is given, perhaps unintentionally, that poliomyelitis is probably trasmitted by the agency of insects. On page 208 the discussion of bacterial water examination is inaccurate and quite out of date.

HANDBUCH DER PATHOGENEN MIKROORGANISMEN. Herausgegeben von W. Kolle, R. Kraus und P. Uhlenhuth. Lieferung 27. Band VI. Infektionen durch Nekrosebacillen. Von Dr. B. Albrecht. Der infektiöse Abortus des Rindes (Bang-Infektion). Von Dr. K. Poppe. Der infektiöse Abortus des Pferdes. Von Prof. Dr. R. von Ostertag. Die Paratuberkulose des Rindes. Von Prof. Dr. H. Miessner, und Dr. R. Berge. Bösartiges Katarrhalfieber des Rindes. Von Dr. W. Geiger. Epizootische Lymphagefässentzündung (Lymphangitis epizootica). Von Dr. G. Baars. Schweineseuche. Von Dr. K. Glässer. Bilharziasis oder Schistosomuminfektionen. Von Dr. Ad. Lutz, und Dr. G. A. Lutz. Die Ankylostomiasis in der gemässigten Zone. Von Prof. Dr. H. Bruns. Die Ankylostomiasis der Tropen und Subtropen. Von Dr. Baermann. Third edition. Paper. Price, 34 marks. Pp. 673-992, with illustrations. Jena: Gustav Fischer, 1929.

The present lively interest in undulant fever will cause many workers to turn to the article on the infectious abortion of cattle. They will not be disappointed. Poppe has written an excellent summary of our knowledge and shows thorough acquaintance with American work. There is a good article on schistosomiasis by well known Brazilian investigators. Hookworm in the temperate zone receives separate treatment from hookworm in hot countries, the latter article drawing especially on the rich fund of information accumulated by the workers of the Rockefeller Foundation.

TRAVAUX PRATIQUES DE PARASITOLOGIE. Par E. Brumpt, professeur de parasitologie à la Faculté de médecine de Paris, et M. Neveu-Lemaire, professeur agrégé à la Faculté de médecine de Paris. Paper. Price, 30 francs. Pp. 301, with 202 illustrations. Paris: Masson & Cie, 1929.

The growing importance of parasitology in college curriculums for students of medicine and public health as well as in veterinary science, animal husbandry and other special lines makes an increasing demand for a textbook of laboratory methods. The present work is written by two of the best known and most fruitful researchers in the field and it justifies the expectations with which it was opened. After a brief statement of general principles a series of ten laboratory sessions is outlined covering each a group of parasitic forms of which all concern animal parasites save the last, dealing with fungi. At the end comes a valuable appendix on intermediate hosts and reservoirs of virus of human parasites. The individual topics are clearly and concisely handled, well illustrated by sketches that bring out diagnostic characters, and replete with suggestions of marked value for practical work. The book follows the plan developed by the authors in their course developed at the Medical Faculty of the University of Paris.

TEXTBOOK OF CLINICAL NEUROLOGY FOR STUDENTS AND PRACTITIONERS. By M. Neustaedter, M.D., Ph.D., Visiting Neurologist, Central Neurological Hospital, Welfare Island. With an introduction by Edward D. Fisher, M.D. Cloth. Price, $6 net. Pp. 602, with 228 illustrations. Philadelphia: F. A. Davis Company, 1929.

This is a well written and thoroughly complete treatise on clinical neurology, adapted for use by the general practitioner. The author stresses to too great a degree his own work on the immunologic reaction of the spinal fluid in poliomyelitis and epidemic encephalitis which has not been confirmed by other observers. On the whole the book merits recommendation, but it is not greatly superior to many similar books.

DIE RÖNTGENTECHNIK IN DIAGNOSTIK UND THERAPIE. Ein Lehrbuch für Studierende und Ärzte. Von Dr. S. Glasscheib, Spezialarzt für Röntgenologie, Berlin-Warschau. Mit einem Geleitwort von Dr. Max Cohn, dirigierendem Arzt der Röntgenabteilung des Städtischen Krankenhauses im Friedrichshain, Berlin. Paper. Price, 13.60 marks. Pp. 294, with 145 illustrations. Berlin: Julius Springer, 1929.

This German work on roentgen technic is announced as a textbook for students and physicians. The material is evidence that its author is a roentgenologist of much ability. His effort receives commendatory support in the preface by his teacher Max Cohn, director of the roentgen department of the state hospital in Friedrichshain, Berlin. It is a satisfactory presentation of the technical phases of the work and deserves favorable comment for the practical manner in which the various aspects of the subject are given. There is an absence of formulas of higher mathematics which some other books contain and which only an exceedingly small percentage of readers can read or evaluate intelligently. The book contains much helpful material, not only in diagnostic exposure but also in therapeutic application of the x-rays. Special positioning of various anatomic regions, some of which present peculiar difficulties, are dealt with in detail and are well illustrated.

POCKET ATLAS OF ANATOMY. By Victor Pauchet and S. Dupret. Leather. Price, $4. Pp. 306, with 297 illustrations. New York: William Wood & Company, 1929.

This atlas is of convenient size, as its name indicates, and may be carried about by students and surgeons who wish such information when the larger atlases are not accessible. The plates are well selected. All were made especially for this book by S. Dupret. There is no text. The plates are diagrammatic and most are systematic; that is, each deals with the muscular system or other single systems. A few cross and longitudinal sections are included. The names on the plates are reduced to the minimum of length. They do not conform with the international anatomic nomenclature. The book should be convenient for those who wish to carry a simple atlas about with them.

DIAGNOSTIC ET TRAITEMENT DE LA BLENNORRAGIE CHEZ L'HOMME ET CHEZ LA FEMME. Par le Dr. Jules Janet. Paper. Price, 60 francs. Pp. 536, with 143 illustrations. Paris: Masson & Cie, 1929.

This is an exhaustive exposition of the diagnosis and treatment of gonococcal infections. In the treatment of gonorrheal urethritis the author dwells particularly on his own irrigation method. He believes that complications occurring with this method and the subsequent criticism are the result of mistakes. This does not prevent the author from describing other methods of treatment in detail. Instrumentation during the acute and subacute stage is decried with the exception of catheterization in case retention of urine cannot be relieved in any other way. A special chapter is devoted to the discussion of gonorrhea in the female. The author takes a conservative view of diathermy and specific and nonspecific protein therapy.

LE CARDIOGRAMME DE DÉCUBITUS LATÉRAL GAUCHE EN CLINIQUE. Analyse. Interprétation rapports avec la valeur fonctionelle du cœur. Par V. Pachon, professeur de physiologie à la Faculté de médecine de Bordeaux, et Roger Fabre, sous-directeur du laboratoire de physiologie clinique à la Faculté de médecine de Bordeaux. Paper. Price, 20 francs. Pp. 86, with 94 illustrations. Paris: Gaston Doin & Cie, 1929.

As stated in the title and several times in the book, the cardiogram referred to is the one taken with the patient in the left lateral decubitus. Carefully taken in this position and critically studied, the cardiogram yields much information as to the functional capacity of the myocardium. The authors, after describing the details of the normal tracing, consider the deviations from the normal in such conditions as hypertension with gallop rhythm, aortic disease, mitral disease, bradycardia and extrasystole. Many illustrations serve to elucidate the text and convince one of the correctness of the authors' views. The emphasis is always on the clinical value of the method. There is intentionally little consideration of fundamental physiologic questions or such as are of a controversial or theoretical nature, though, as is well known, several cardiac problems, particularly some that concern the cardiac impulse, have been solved largely by the use of the cardiograph. The volume may well be interesting and useful to the student of cardiology. Undoubtedly the cardiogram has a certain clinical value. How much information it affords that is not obtainable by simpler methods is questionable. There is also the same objection against its use that has been made in the case of the phlebogram and the polygram, that the interpretation of many of the tracings is often extremely difficult or even impossible.

Books Received

Books received are acknowledged in this column, and such acknowledgment must be regarded as a sufficient return for the courtesy of the sender. Selections will be made for more extensive review in the interests of our readers and as space permits. Books listed in this department are not available for lending. Any information concerning them will be supplied on request.

BEITRÄGE ZUR ENTWICKLUNGSGESCHICHTE DES MENSCHLICHEN GEHIRNS. II. Teil, (3) Schlusslieferung: Die Entwicklung des Mittel- und Rautenhirns. Von Prof. Dr. Ferdinand Hochstetter, Vorstand der II. anatomischen Lehrkanzel der Universität Wien. Paper. Price, 42 marks. Pp. 81-206, with 33 plates. Vienna: Franz Deuticke, 1929.

Large monograph with handsome illustrations depicting the embryology of the brain.

OLD AGE: THE MAJOR INVOLUTION. The Physiology and Pathology of the Aging Process. By Aldred Scott Warthin, Ph.D., M.D., LL.D., Professor of Pathology and Director of the Pathological Laboratories in the University of Michigan. Cloth. Price, $3 net. Pp. 199, with 29 illustrations. New York: Paul B. Hoeber, Inc., 1929.

A classic essay indicating that age is not always the most desirable physical state of man.

CLINICAL ELECTROCARDIOGRAMS: THEIR INTERPRETATION AND SIGNIFICANCE. By Frederick A. Willius, B.S., M.D., M.S., in Medicine. Section on Cardiology, the Mayo Clinic. Mayo Clinic Monographs. Cloth. Price, $8. Pp. 219, with 368 illustrations. Philadelphia: W. B. Saunders Company, 1929.

New edition of a scientific guide to the use of the electrocardiograph in the study of cardiac disturbances.

VIE ET REPRODUCTION: Notions actuelles sur les problèmes géneraux de la biologie animale. Par Max Aron, Docteur ès sciences, professeur a la Faculté de médecine de Strassbourg. Préface du Pr. P. Bouin. Paper. Price, 38 francs. Pp. 366, with 190 illustrations. Paris: Masson & Cie, 1929.

Consideration of the biology of reproduction.

PHYSICAL THERAPEUTIC TECHNIC. By Frank Butler Granger, A.B., M.D., Director of Physiotherapy, United States Army. With a foreword by William D. McFee, M.D. Cloth. Price, $6.50 net. Pp. 417, with 135 illustrations. Philadelphia: W. B. Saunders Company, 1929.

Most recent safe guide to physical therapy by recently deceased member of the A. M. A. Council on Physical Therapy.

THE NEW-BORN INFANT: A Manual of Obstetrical Pediatrics. By Emerson L. Stone, M.D., Assistant Clinical Professor of Obstetrics and Gynecology, School of Medicine, Yale University. Cloth. Price, $2 net. Pp. 183. Philadelphia: Lea & Febiger, 1929.

Brief outline describing simple technic of attention to the newly born infant.

FOODS OF THE FOREIGN-BORN IN RELATION TO HEALTH. By Bertha M. Wood, Consulting Dietitian Food Clinic, Boston Dispensary. With a Foreword by Michael M. Davis, Jr. Second edition. Cloth. Price, $1.25. Pp. 110. Boston: M. Barrows & Company, 1929.

New edition of a popular and scientific study of the foods of foreigners.

A PATIENT'S MANUAL OF DIABETES. By Herbert W. Moxon, B.A., M.R.C.S., L.R.C.P., Hon. Physician, the Perth Hospital, Perth, Western Australia. Cloth. Price, $2.25. Pp. 132. New York: William Wood & Company, 1929.

Another manual, this time from Australia, concerning self-help for the diabetic patients.

A MANUAL OF HELMINTHOLOGY, MEDICAL AND VETERINARY. By H. A. Baylis, M.A., D.Sc., Assistant Keeper, Department of Zoology, British Museum (Natural History). Cloth. Price, $10. Pp. 303, with 200 illustrations. New York: William Wood & Company, 1929.

Authoritative British guide to the worms that infest man and beast.

THE TONSILS AND ADENOIDS AND THEIR DISEASES INCLUDING THE PART THEY PLAY IN SYSTEMIC DISEASES. By Irwin Moore, M.B., C.M. Cloth. Price, $6.50. Pp. 395, with 107 illustrations. St. Louis: C. V. Mosby Company, 1928.

A guide for otolaryngologists and a review of focal infection.

THE WRITING OF MEDICAL PAPERS. By Maud H. Mellish-Wilson, Editor of the Mayo Clinic Publications. Third edition. Paper. Price, $1.50. Pp 184. Philadelphia: W. B. Saunders Company, 1929.

The technic of the paragraph, outline, comma and similar attributes of a well prepared manuscript.

ÉTUDE CLINIQUE ET RADIOLOGIQUE DES CAVERNES TUBERCULEUSES: Spéléologie pulmonaire. Par Dr. Jaquerod. Paper. Price, 30 francs. Pp. 15, with 40 plates. Paris: Masson & Cie, 1928.

Monographic study of advanced tuberculosis.

AGELESS YOUTH. By Charlotte C. West, M.D. Cloth. Price, $3. Pp. 467. New York: Thomas Y. Crowell Company, 1929.

Collected chapters of advice and prescriptions for ladies seeking sophisticated beauty.

PHYSIOLOGICAL RESPONSE ATTENDING EXPOSURE TO VAPORS OF METHYL BROMIDE, METHYL CHLORIDE, ETHYL BROMIDE AND ETHYL CHLORIDE. Prepared from Data Contained in the Report of the Bureau of Mines to the National Research Council and the Dow Chemical Company. By R. R. Sayers, Surgeon, United Public Health Service, W. P. Yant, Supervising Chemist, B. G. H. Thomas, Associate Pathologist, and L. B. Berger, Laboratory Assistant United States Bureau of Mines. Prepared by direction of the Surgeon General. Treasury Department, United States Public Health Service, Public Health Bulletin No. 185. Paper. Price, 15 cents. Pp. 56, with illustrations. Washington, D. C.: Supt. of Doc., Government Printing Office, 1929.

PROTOZOOLOGY: A MANUAL FOR MEDICAL MEN. By John Gordon Thomson, M.A., M.B., Ch.B., Director, Department of Protozoology, London School of Hygiene and Tropical Medicine, and Andrew Robertson, M.B., Ch.B., Lecturer and Milner Research Fellow in the Department of Protozoology, London School of Hygiene and Tropical Medicine. Cloth. Price, $11. Pp. 376, with 220 illustrations. New York: William Wood & Company, 1929.

NOTES ON CHRONIC OTORRHŒA WITH ESPECIAL REFERENCE TO THE USE OF ZINC IONIZATION IN THE TREATMENT OF SELECTED CASES. By A. R. Friel, M.A., M.D., F.R.C.S.I., an Assistant Aurist, School Medical Service, London County Council. Cloth. Price, $2.25. Pp. 88, with 54 illustrations. New York: William Wood & Company, 1929.

SURGICAL RADIOLOGY. By A. P. Bertwistle, M.B., Ch.B., F.R.C.S. With an introduction by D. P. D. Wilkie, O.B.E., F.R.C.S., Professor of Surgery, University of Edinburgh. Cloth. Price, $3.50 net. Pp. 142, with 21 illustrations. Philadelphia: P. Blakiston's Son & Company, 1929.

TRANSACTIONS OF THE SEVENTH CONGRESS OF THE FAR EASTERN ASSOCIATION OF TROPICAL MEDICINE HELD IN BRITISH INDIA, DECEMBER, 1927. Edited by Lt.-Col. J. Cunningham, C.I.E., B.A., M.D., Director, Pasteur Institute of India. Volume I. Cloth. Pp. 865, with illustrations. Calcutta: Thacker's Press & Directories, Ltd., 1928.

PRÉCIS DE PHYSICO-CHIMIE BIOLOGIQUE ET MÉDICALE. Par André Dognon, Professeur agrégé de physique médicale à la Faculté de médecine de Paris. Préface du professeur A. Strohl. Cloth. Price, 36 francs. Pp. 310, with 63 illustrations. Paris: Masson & Cie, 1929.

THE TOXEMIAS OF PREGNANCY. By H. J. Stander, Associate Professor of Obstetrics, Johns Hopkins University Medical School. Medicine Monographs, Volume XV. Cloth. Price, $3. Pp. 161. Baltimore: Williams & Wilkins Company, 1929.

REPORT OF THE STATE TUBERCULOSIS COMMISSION TO THE GOVERNOR FOR THE PERIOD BEGINNING JULY 1ST, 1926, AND ENDING JUNE 30, 1928. State of Connecticut, Public Document No. 53. Paper. Pp. 67. Hartford, 1928.

ANNUAL REPORT OF THE STATE BOARD OF HEALTH OF MARYLAND FOR THE YEARS ENDING DECEMBER 31, 1925, DECEMBER 31, 1926, AND DECEMBER 31, 1927. Paper. Pp. 186, 209 and 220. Baltimore, 1927, 1928, 1929.

FOURTEENTH ANNUAL REPORT OF THE SANATORIUM OF THE METROPOLITAN LIFE INSURANCE COMPANY, MOUNT MCGREGOR, N. Y., 1928. Paper. Pp. 31. New York: Metropolitan Life Insurance Company, 1928.

ÉTUDE ÉLÉMENTAIRE DES ARYTHMIES: Lecture des électrogrammes, phono et cinématographie. Par R. Lutembacher. Paper. Price, 30 francs. Pp. 110, with 78 illustrations. Paris: Masson & Cie, 1929.

AIDS TO MEDICINE. By James L. Livingstone, M.D., M.R.C.P., Junior Physician King's College Hospital. Fourth edition. Cloth. Price, $1.75. Pp. 414. New York: William Wood & Company, 1929.

REVIEW OF LEGAL EDUCATION IN THE UNITED STATES AND CANADA FOR THE YEAR 1928. By Alfred Z. Reed. Paper. Pp. 51. New York: Carnegie Foundation for the Advancement of Teaching, 1929.

ÉTIOLOGIE ET PROPHYLAXIE DE LA GRIPPE: Bacille de Pfeiffer virus, filtrant grippal. Par R. Dujarric de la Rivière. Paper. Price, 32 francs. Pp. 105, with illustrations. Paris: Masson & Cie, 1929.

TRANSACTIONS AND ANNUAL REPORTS OF THE ITALIAN MEDICAL SOCIETY OF BROOKLYN, 1927-1928. Paper. Pp. 72, with 9 illustrations. Brooklyn: Italian Medical Society, 1929.

ALIMENTOS DEL LACTANTE. Por el Dr. Victor Escardó y Anaya, Profesor de la Facultad de Medicina de Montevideo. Price, 1.00 oro. Paper. Pp. 98. Montevideo, 1929.

Medicolegal

Death from Accident or from Brain Tumor

(McCarthy v. General Electric Co. (Pa.), 143 A. 116)

McCarthy was employed by the defendant, the General Electric Company. He fell on the floor of his employer's plant. No one saw the fall, but it was heard, and McCarthy was immediately found, unconscious, with his face in a pool of blood, having broken his nose and suffered other injuries. He recovered consciousness and was sent to the hospital. The next morning, having left his bed without permission, he fell again and became unconscious. Five days later he died. He had been apparently in good health, but the surgeon testified that McCarthy, when brought into the surgeon's office, admitted having a syphilitic tumor of the brain. The Wassermann test seemed to indicate that McCarthy had syphilis. McCarthy admitted, the evidence showed, that he did not know how he happened to fall. His widow applied to the compensation board for compensation. An award was made, which was affirmed by the court of common pleas, Erie County. Thereupon the employer appealed to the supreme court of Pennsylvania.

As McCarthy fell on his employer's premises while engaged at his work, his injury was sustained during the course of his employment, within the provisions of the Pennsylvania workmen's compensation act. Under that act it is sufficient if the accidental injury happens in the course of the employment; it is not necessary that the injury grow out of the employment, nor is it necessary that the fall result from an accident, as the fall itself is an accident. It is not material that the employee fell because he became dizzy or unconscious; an injury sustained by an accidental fall is compensable, even though the fall results from some disease with which the employee is afflicted. An accidental injury, under the Pennsylvania statute, during the course of employment, from an unexplained cause, is compensable; the burden is not on the claimant to show the exact cause. Even though the fall itself resulted from "a lapse of the brain," whether it was gumma or merely vertigo, McCarthy was not without the protection of the act. But on behalf of the employer it was urged that McCarthy's death did not result from the fall but resulted from a syphilitic brain tumor. No postmortem examination of the deceased was made. Roentgenograms showed neither a brain tumor nor a fracture. For the widow, two physicians, one the coroner who examined the body and the hospital charts, and the other who testified as an expert from data given him concerning the case, were positive that death resulted from a fracture at the base of the skull caused by the fall. Several physicians who saw McCarthy after he fell and who testified for the employer were positive that death resulted from a syphilitic infection of the brain. The experts on each side gave substantial reasons for their conclusions. The question resolved itself, therefore, into a question of fact, for decision by the compensation authorities. On appeal, the facts found by the compensation authorities are as conclusive on the appellate tribunal as is the verdict of a jury. The judgment of the court below, sustaining the award by the compensation board, was therefore affirmed.

Compensability for Death Following Herniotomy and Appendectomy

(Atamain's Case (Mass.) 163 N. E. 194)

During an operation performed for the radical cure of hernias, received by the husband of the claimant in the course of his employment, the operating surgeon also removed the appendix. Following the operation, and as a consequential result of it, a blood clot formed, causing death. The claimant proceeded against the employer and the insurance company under the workmen's compensation act. The industrial board found that the death of the employee was properly chargeable to the results of his injury; that although it could not be determined whether the blood clot was a result of the herniotomy or of the removal of the appendix, the removal of the appendix was incidental to the main operation and therefore it was immaterial to what

part of the operation the blood clot was due. The insurer appealed to the supreme judicial court of Massachusetts.

"When an operation is the proper treatment," this court said, "for curing or improving the condition of the employee, and the surgeon in performing the operation does only those things which are incident to such an operation in the practice of surgery, the dependents ought not to be deprived of compensation even if they are unable to prove whether the blood clot causing the death arose from the part of the operation repairing the hernias or from the part which was incidental to the operation." On the facts found by the board, the court held that the conclusion was justified that the causal connection between the injury and death was not broken by the intervention of an intermediate agency and that death resulted from an injury received in and arising out of the course of employment. The decree was affirmed.

Compensation for Services to Patient Mistakenly Thought Indigent

(In Re Agnew's Will (N. Y.), 230 N. Y. S. 519; In Re Security Trust Company of Rochester (N. Y.), 230 N. Y. S. 519)

John C. Agnew, without disclosing at any time that he was worth over $400,000, passed from the outpatient department of a public hospital as a charity patient to its inpatient service. The hospital designated from its staff two surgeons to treat him for an ailment necessitating a major operation. Agnew, by express agreement, paid the hospital its usual, though inadequate, fixed charge for room, nursing and postoperative care. With the staff surgeons assigned to his case, he made no financial arrangement whatever, but he received valuable surgical service from the hospital at their hands. On his death his financial standing became known, and the two surgeons who had operated on him brought suit against his estate for the reasonable value of their services. From a statement of facts agreed to by the parties, it appeared that Agnew obtained admission to the hospital for the purpose of obtaining medical and surgical services without charge and that he had no expectation or intention of paying for them, but it did not appear whether he did so fraudulently or through mistake. Relying on the classification of Agnew as a charity patient, by the admitting clerk of the hospital, the staff surgeons who performed the operation did so without any intention of charging for it and without any expectation of recompense from him. They had no direct contractual relation with Agnew. What, said the surrogate's court, Monroe County, is the legal bearing of these mistaken notions of each of the parties, uncommunicated to the other; on the part of the surgeons that they were operating on a pauper gratuitously, and on the part of the patient that he would not have to pay for services received?

Members of the medical staff of a hospital are neither its servants nor its agents; they are individuals acting in an independent employment or undertaking. The members of the staff, out of the traditional charity of their profession and for the advancement of scientific knowledge and in aid of social betterment, undertake to treat gratuitously, in the hospital, patients who have not the ready means to pay for services. It was not for the surgeons who operated on Agnew, however, to investigate his financial status; they had a right to rely on his classification as a charity patient by the admitting clerk, and there is nothing to suggest that they had any reason to suspect that a mistake had been made. If they had known that he was well able to pay they would have had the right, both professionally and under their arrangement with the hospital, to refuse to treat him gratuitously. Agnew, it is true, had entered into an express contract with the hospital, but that contract, by reason of mistake or intent, included only a part of the service that he actually received through the hospital from its staff. By reason of mistake, the operating surgeons were induced to render him valuable services. Notwithstanding that the surgeons in this case mistook the decedent for a pauper, and he mistook them as merely doing a charitable act, he received a valuable benefit which entailed a duty of restitution. In equity and in good conscience, his executor should pay these surgeons the reasonable value of the services rendered. Decree was entered accordingly.

Emergency Operation Without Consent Justifiable

(Delahunt v. Finton (Mich.), 221 N. W. 168)

The plaintiff claimed that, while he was under the influence of an anesthetic for the purpose of an examination, the defendant passed a filiform bougie into the bladder, which looped there and could not be withdrawn, and that the defendant thereupon, without his consent, operated. Difficulty with the bougie, the plaintiff alleged, was due to the defendant's carelessness. The defendant, on the other hand, claimed that he was employed by the plaintiff to operate, that the looping of the bougie was an unforeseen contingency resulting in such an emergency as to endanger the defendant's life and health, and that acting on his best judgment and after consultation with his associates he operated in the emergency. Judgment was given for the defendant, and thereupon the plaintiff appealed to the supreme court of Michigan. It is settled, said the supreme court, that a surgeon may lawfully perform, and it is his duty to perform, such an operation as good surgery demands, in cases of emergency, without the consent of the patient. In so doing he is not liable for an honest error of judgment. The charge of the trial court on the question of an existing emergency was warranted by the law and the facts and the determination of the jury was final. For this and other reasons stated in the opinion, the judgment of the court below was affirmed.

Society Proceedings

COMING MEETINGS

American Medical Association, Portland, Ore., July 8-12. Dr. Olin West, 535 North Dearborn Street, Chicago, Secretary.

American Association for the Study of Allergy, Portland, Ore., July 8-9. Dr. Warren T. Vaughan, 118 E. Franklin St., Richmond, Va., Sec'y.

American Association of Medical Milk Commissions, Montreal, June 24-25. Dr. Harris Moak, 360 Park Place, Brooklyn, Secretary.

American Bronchoscopic Society, San Francisco, July 6. Dr. L. H. Clerf, 128 South 10th Street, Philadelphia, Secretary.

American Dermatological Association, San Francisco, July 1-3. Dr. C. Guy Lane, 416 Marlborough Street, Boston, Secretary.

American Federation of Organizations for the Hard of Hearing, Cleveland, June 24-27. Miss Betty C. Wright, 1601 Thirty-Fifth Street, N. W., Washington, D. C., Secretary.

American Heart Association, Portland, Ore., July 9. Dr. Haven Emerson, 370 Seventh Avenue, New York, Secretary.

American Hospital Association, Atlantic City, June 17-21. Dr. Bert W. Caldwell, 18 East Division Street, Chicago, Executive Secretary.

American Laryngological, Rhinological and Otological Society, San Francisco, July 4-6. Dr. R. L. Loughran, 33 E. 63d Street, New York, Sec'y.

American Ophthalmological Society, Hot Springs, Va., June 10-12. Dr. Emory Hill, 501 East Franklin Street, Richmond, Va., Secretary.

American Radium Society, Portland, Ore., July 8-9. Dr. G. W. Grier, Jenkins Arcade Building, Pittsburgh, Secretary.

American Society of Clinical Pathologists, Portland, Ore., July 5-8. Dr. H. J. Corper, National Jewish Hospital, Denver, Secretary.

American Urological Association, Seattle, July 1-3. Dr. Alexander Randall, Medical Arts Building, Philadelphia, Secretary.

Conference of State and Territorial Health Officers with the Public Health Service, Washington, D. C., June 3-4.

Idaho State Medical Association, Lewiston, July 5-6. Dr. J. N. Davis, Kimberly, Secretary.

Maine Medical Association, Poland Springs, June 17-19. Dr. B. L. Bryant, 265 Hammond Street, Bangor, Secretary.

Massachusetts Medical Society, Boston, June 10-12. Dr. Walter L. Burrage, 182 Walnut Street., Brookline, Secretary.

Medical Women's National Association, Portland, Ore., July 7-9. Dr. Elizabeth Kittredge, 3906 McKinley Street, Washington, D. C., Sec'y.

Montana, Medical Association of, Great Falls, July 17-18. Dr. E. G. Balsam, Box 88, Billings, Secretary.

New Jersey, Medical Society of, Atlantic City, June 12-15. Dr. J. B. Morrison, 66 Milford Avenue, Newark, Secretary.

New Mexico Medical Society, Taos, June 12-14. Dr. L. B. Cohenour, 219 West Central Avenue, Albuquerque, Secretary.

New York, Medical Society of the State of, Utica, June 3-6. Dr. D. S. Dougherty, 2 East 103d Street, New York, Secretary.

New York State Association of Public Health Laboratories, Utica, June 3. Mr. M. B. Kirkbride, New Scotland Avenue, Albany, Secretary.

North Dakota State Medical Association, Fargo, June 6-7. Dr. J. G. Lamont, San Haven, Secretary.

Pacific Coast Oto-Ophthalmological Society, Salt Lake City, July 1-3. Dr. Walter F. Hoffman, 817 Summit Avenue, Seattle, Secretary.

Rhode Island Medical Society, Providence, June 6. Dr. J. W. Leech, 369 Broad Street, Providence, Secretary.

Society of Neurological Surgeons, Montreal, Canada, June 3-5. Dr. Francis C. Grant, 133 South 36th Street, Philadelphia, Secretary.

Utah State Medical Association, Salt Lake City, July 1-3. Dr. M. M. Critchlow, Boston Building, Salt Lake City, Secretary.

Western Branch of the American Urological Association, Vancouver, B. C., July 5. Dr. W. E. Stevens, Flood Building, San Francisco, Secretary.

Wyoming State Medical Society, Casper, June 24-25. Dr. Earl Whedon, 50 North Main Street, Sheridan, Secretary.

Current Medical Literature

AMERICAN

The Association library lends periodicals to Fellows of the Association and to individual subscribers to THE JOURNAL in continental United States and Canada for a period of three days. Issues of periodicals are kept on file for a period of five years only. Requests for issues of earlier date cannot be filled. Requests should be accompanied by stamps to cover postage (6 cents if one and 12 cents if two periodicals are requested). Periodicals published by the American Medical Association are not available for lending, but may be supplied on purchase order. Reprints as a rule are the property of authors and can be obtained for permanent possession only from them.

Titles marked with an asterisk (*) are abstracted below.

American Heart Journal, St. Louis

4: 377-498 (April) 1929

*Cardiac Pain. R. L. Levy, New York.—p. 377.
*Pain Due to Temporary Occlusion of Coronary Arteries in Dogs. J. F. Pearcy, New York, W. S. Priest and C. M. Van Allen, Chicago.—p. 390.
*Relation of Clinical, Including Electrocardiographic, Phenomena to Occlusion of Coronary Arteries. H. J. Stewart, New York.—p. 393.
*Action of Digitalis in Complete Heart Block. S. P. Schwartz, New York.—p. 408.
Incidence and Significance of Electrocardiograms Showing Features of Left Axis Deviation and Q-R-S of Normal Duration with Inverted T_1 and Upright T_3. D. Luten and E. Grove, St. Louis.—p. 431.
Preemployment Examination of Cardiac Worker. C. H. Watson, New York.—p. 442.
Mortality and Morbidity from Heart Disease Under Industrial and Group Insurance. W. Wright, New York.—p. 448.
Problem of Classification of Heart Diseases: V. Heart Disease Among Ex-Service Men. P. B. Matz, Washington, D. C.—p. 455.
Elimination from Electrocardiogram of Effects of Alternating Current of Power and Lighting Lines. R. A. Waud, London, Ont.—p. 477.
Pleural Effusion Associated with Congestive Heart Failure Localized in Interlobar Space. E. F. Kiser, Indianapolis.—p. 481.
Retroperitoneal Abscess of Splenic Origin in Subacute Bacterial Endocarditis. E. Weiss, Philadelphia.—p. 484.

Nosology of Cardiac Pain.—Levy concludes that the "disorder of the breast" described by Heberden has in the light of increasing experience proved to be the symptomatic manifestation of many pathologic states. Perpetuation of the name originally given to the condition, and the concept of angina as a clinical entity, has resulted in confusion and disagreement as to its precise meaning. It is suggested that the term angina pectoris be abandoned. Correlation of clinical and pathologic data has demonstrated that cardiac pain may be associated with a variety of structural and functional changes. Pain resulting from disturbances in the region of the heart is best described as cardiac pain. In making a complete cardiac diagnosis, this should be qualified by a statement as to the probable structural and functional changes with which the pain is associated. Further knowledge concerning the mechanism of pain production may point the way to a more precise terminology. The conception of pain as a symptom will make for better diagnosis, for rational therapy, and for more accurate prognosis.

Pain Due to Temporary Occlusion of Coronary Arteries in Dogs.—Pearcy et al. point out that previous investigators have failed to get a pain response in dogs following coronary occlusion, possibly because the animals had adjusted themselves to the altered cardiac condition by the time they recovered sufficiently from the anesthetic and surgical insult. The detection of pain in their experiments was made possible by avoidance of anesthesia at the time of coronary occlusion. Acute severe pain was produced in forty out of fifty dogs by sudden occlusion of either coronary artery or of either or both branches of the left coronary artery, the pain beginning almost instantly after occlusion, lasting throughout occlusion, and ceasing immediately with release of the occlusion. When the two coronary arteries were occluded simultaneously, similar responses resulted, except that in a few cases ventricular fibrillation and death occurred. The ten dogs that gave less clear-cut results were not sufficiently alert to respond properly. The responses are said to be due to real pain and not to cardiocirculatory failure and asphyxia.

Relation of Clinical Phenomena to Occlusion of Coronary Arteries.—The clinical and postmortem phenomena in a patient dying of coronary occlusion are presented by Stewart. From examination of the heart at autopsy there is no doubt that the patient had suffered from infarcts in the heart on many occasions. These had apparently occurred without causing conspicuous symptoms. There was nothing in the history, physical examination or electrocardiographic record that led to the suspicion that the patient had been the subject of such grave changes in the myocardium and coronary vessels as were found at autopsy. There were only two attacks of cardiac pain; the first occurred three and a half years before admission to the hospital, and the second nine days before death. Both these attacks came on at night while the patient was asleep. They occurred obviously without physical exertion. Following the last attack of severe cardiac pain, there occurred the only known disturbance of cardiac rhythm. There were none of the usual signs associated with coronary thrombosis, such as rise in temperature or pericardial friction rub. At autopsy there was a fresh infarct in the left ventricle, at the base of the posterior papillary muscle corresponding to a region supplied by the circumflex branch of the left coronary artery. The cardiac pain from which the patient suffered nine days before death may have been due to the occurrence of this infarct. Evidence that injury to the cardiac muscle had occurred after the time of the cardiac pain was shown in the electrocardiogram.

Action of Digitalis in Complete Heart Block.—Schwartz asserts that digitalis in therapeutic doses may be of great benefit to patients with complete heart block and heart failure. The improvement in these patients takes place through the direct action of digitalis on the heart muscle and not through an acceleration of the automatic beating ventricles. In three out of eight patients with complete heart block studied, the ventricular rate was increased appreciably only after the administration of digitalis in doses larger than those commonly employed in therapeutics. The increase of the ventricular rate in complete heart block during the administration of digitalis is regarded as a toxic manifestation of the drug, and because of the undesirable effects calls for its immediate withdrawal. Transient auricular fibrillation is another manifestation of digitalis intoxication in complete heart block. Since it is difficult to appreciate the various types of toxic rhythms that manifest themselves in complete heart block during digitalis therapy, Schwartz deems it advisable to prescribe the drug to such patients, under careful graphic control.

American J. Ophthalmology, Chicago

12: 173-264 (March) 1929

Measured Correction of Squint by Combined Technic. W. H. Lowell, Boston.—p. 173.
Trichinosis with Exophthalmos: Case. B. W. Key, New York.—p. 178.
Optical Correction of Conical Cornea with Contact Glass. D. H. O'Rourke, Denver.—p. 187.
Hyperopic Undercorrection Due to Retinoscopy. W. S. Knighton, New York.—p. 191.
Scotoma Associated with Strabismus. J. N. Evans, New York.—p. 194.
Lamp for Eye Surgery. C. T. Eber, St. Louis.—p. 214.

American Journal Psychiatry, Baltimore

8: 783-967 (March) 1929

Factors in "Mechanical Theory of Epilepsy": Influence of Fluid and Control. T. Fay, Philadelphia.—p. 783.
Relation of Physicochemical Processes to Epileptiform Seizures. W. G. Lennox and S. Cobb, Boston.—p. 837.
Clinical Phenomena Associated with Depressions, Anxieties and Other Affective or Mood Disorders. L. H. Ziegler, Rochester, Minn.—p. 849.
Psychodynamic Patterns. G. C. Terry, Baltimore.—p. 881.
Physical Findings in Schizophrenia. K. M. Bowman and A. F. Raymond, Boston.—p. 901.
Focal Infection in Teeth. G. W. Henry and M. C. H. Doyle, White Plains, N. Y.—p. 915.
Psychoanalytic Mechanisms in Clinical Psychiatry. W. Malamud, Foxborough, Mass.—p. 929.

American J. Surgery, New York

6: 405-568 (April) 1929

Emergency Blood Matching, Typing and Transfusion. R. A. Cutting, New Orleans.—p. 405.
Ingrowing Toe Nail. H. F. Graham, New York.—p. 411.
Endocervicitis: Office Treatment. H. B. Matthews, New York.—p. 414.
Warts, Moles and Corns. H. Fox, New York.—p. 418.
Skin Cancer. A. Potter, New York.—p. 423.
Fissure of Anus and Thrombotic Hemorrhoids. F. C. Yeomans, New York.—p. 426.
Adhesive Plaster Strapping. A. Krida, New York.—p. 430.
Exploratory Thoracentesis. R. F. Harloe, New York.—p. 433.

Strangulated Hernia. F. D. Jennings, New York.—p. 435.
*Infections of Face. E. M. Foote, New York.—p. 438.
Operative Treatment of Hallux Rigidus. G. P. Mills, Birmingham, England.—p. 443.
Contusions and Abrasions. J. J. Moorhead, New York.—p. 445.
Treatment of Injuries of Chest. R. B. Bettman, Chicago.—p. 449.
Circumcision. C. G. Bandler, New York.—p. 455.
*Treatment of Boils and Carbuncles. G. C. Andrews, New York.—p. 458.
Lame Back. F. R. Ober, Boston.—p. 461.
Everyday Ocular Injuries. C. W. Rutherford, Iowa City.—p. 468.
Inflammatory Reaction: Significance. C. B. Strauch, McGregor, Minn. —p. 471.
Pruritus Ani: General Practitioner. J. F. Montague, New York.—p. 475.
*Injection Treatment of Varices and Ulcers of Lower Extremities. I. S. Tunick, S. Dubin and A. Schmier, New York.—p. 479.
Application and Removal of Plaster-of-Paris Bandages. M. W. Ware, New York.—p. 487.
Gangrene of Foot. H. F. Wolf, New York.—p. 491.
Cartilage Injuries. W. W. Lasher, New York.—p. 493.
Fractures of Fingers. E. L. Eliason, Philadelphia.—p. 501.
*Carbolized Scalpel and Postoperative Ileus. A. L. Soresi, New York. —p. 506.
Perianal and Perirectal Suppurations. M. L. Bodkin, New York.—p. 509.
Foreign Bodies in Ear and Nose. G. L. Richards, Fall River, Mass.—p. 514.
Common Dislocations. K. Speed, Chicago.—p. 517.
Tannic Acid Treatment of Burns. E. P. Dunn, New York.—p. 519.
Sprains and Injuries of Fingers and Toes. H. A. Thompson, Raleigh, N. C.—p. 522.
Leukorrhea. K. P. Neal, Raleigh, N. C.—p. 524.
Pressure Dressing. H. A. Royster, Raleigh, N. C.—p. 525.
Catheterization in Male. E. K. Morgan, New York.—p. 527.
Infections of Hand. C. A. Raison, Birmingham, England.—p. 530.
Paronychia and Felons. J. Browder, New York.—p. 535.
*Infections of Breast. S. Leigh, Norfolk, Va.—p. 538.
Nonoperative Procedures in Urology. R. L. Dourmashkin, New York. —p. 540.
Epithelioma of Extremities. R. F. Perez, Jr., New York.—p. 545.
Industrial Trauma. H. C. W. S. de Brun, New York.—p. 549.
Improved Instrument for Application and Removal of Wound Clips. W. L. Secor, Kerrville-on-the-Guadalupe, Texas.—p. 552.
Pilonidal Cyst. P. J. Dulligan, New York.—p. 554.

Infections of Face.—Foote says that, all things considered, the conclusion seems warranted that infections of the face present no peculiarities which set them apart in their treatment from infections of other parts of the body, and that prompt correct incision of a focus of infection offers the best chance to check the infection locally, to limit its tendency to spread, and thus to favor a prompt cure of the patient. If one wishes a motto for his guidance in these cases, let him disregard one that has recently been offered, Noli me tangere, and choose rather one with centuries of success to its credit, Ubi pus, ibi evacua.

Treatment of Boils and Carbuncles.—Andrews favors treating an incipient boil early by radiotherapy, which usually aborts the lesion with prompt relief of discomfort and expedites involution without suppuration and without scarring, or by ultraviolet irradiation, one treatment often proving effective. A localized and inactive boil should be freely incised, followed by distance ultraviolet radiation to hasten healing. In recurrent and chronic types confined to localized areas, fractional unfiltered or filtered roentgen rays are recommended, with generalized ultraviolet ray baths for tonic effects. In the superficial type of carbuncle either roentgen or ultraviolet ray therapy causes prompt relief of pain, rapid regression and evacuation of pus. In the deep type, incision is generally the preferable method, supplemented by local and general actinotherapy.

Injection Treatment of Varices and Ulcers of Lower Extremities.—Tunick et al. have employed exclusively either sodium chloride solution, 20 per cent, or sodium salicylate, 30 per cent, for the injection of varicose veins. The amount of solution employed varies from 1 to 10 cc., depending on the size and extent of the vein injected. The salt solution has two advantages over the salicylate solution: It does not produce such severe cramps and it is not toxic. The only disadvantage is that if the injection has extended outside the vein, the slough produced is much severer and larger than that produced by salicylates. The salicylates sometimes produce poisoning in persons who have an idiosyncrasy. This is manifested by dizziness, scaly eruption on the body, and even vomiting. The cramplike pain produced after the injection is sometimes excruciating. All these symptoms will disappear with the discontinuation of the salicylates. Occasionally a patient with very large veins does not respond to a 20 per cent chloride or a 30 per cent salicylate solution. Such patients will respond very well to a 30 per cent chloride or a 40 per cent salicylate solution.

Phenolized Scalpel and Postoperative Ileus.—Soresi stresses the fact that even deep tissues such as the pleura and the pouch of Douglas can be painlessly incised with a sharp scalpel, previously dipped in pure phenol. A dry, sharp scalpel is dipped in pure phenol. The point of the back of the scalpel is passed over the intended line of incision, so as to mark it with the phenol. A few seconds later the scalpel is dipped again in the phenol and the tissues are incised very slowly and gently, the scalpel being moved up and down as in cutting with a saw. When blood appears, a sponge or blunt retractors are applied to the tissues, if nesessary. The scalpel is dipped in pure phenol as often as required. The repeated dippings of the scalpel in phenol are required in order to deposit on the blade a film of phenol, which, coming in contact with the tissues as they are cut, anesthetizes them. This film is rubbed off by the tissues or washed off by the blood through which the blade passes, and therefore has to be renewed as often as necessary, according to the depth of the tissues to be incised. In order to prevent burning of the skin surrounding the incision, either during or immediately after the incision is made, the skin is swabbed with a sponge soaked with alcohol. The incision should always be very small; a large incision is never necessary. Painless and self-draining incisions are obtained with the phenolized scalpel. When a collection of pus is present, the pus will ooze out through the open wound without the help of any means of drainage. The phenolized scalpel is the ideal method of treatment for collections of pus. No drain is ever necessary. The method has been used by the author for the last twelve years in thousands of cases, always with complete satisfaction.

Infections of Breast.—In the treatment of distended, hard and painful breasts (so-called caked breasts), Leigh applies solution of aluminum acetate, one part to six parts water, used with moist gauze and a protective, such as oiled muslin or waxed paper, and changed frequently. The formula for solution of aluminum acetate is: acetate of lead, 7 Gm.; aluminum sulphate, 20 Gm., and distilled water, 220 Gm. This is allowed to stand for two hours. Chemical reaction takes place, resulting in a solution of aluminum acetate, lead sulphate being precipitated. Thorough filtering is required to get rid of the latter.

Annals Otology, Rhinology & Laryngology, St. Louis

38: 1-312 (March) 1929

Report of Ear and Throat Department, Royal Infirmary, Edinburgh (Year 1927). J. S. Fraser and G. L. Reid, Edinburgh, Scotland.—p. 1.
Treatment of Cancer of Pharynx, Larynx and Esophagus by Surgical Diathermy. D. Mackenzie, London, England.—p. 32.
Vasomotor Affections of Internal Ear. G. Portmann, Bordeaux.—p. 69.
Headache from Standpoint of Rhinologist. H. Dintenfass, Philadelphia. —p. 77.
Diagnosis of Antral Infection. M. S. Ersner, Philadelphia.—p. 87.
Roentgen Examination of Deformities of Nasopharynx. A. Schüller, Vienna, Austria.—p. 109.
Development of Sinuses After Birth. T. E. Carmody, Denver.—p. 130.
Some Practical Considerations in Problem of Sinus Infection and Drainage. H. L. Baum, Denver.—p. 152.
Nitrous Oxide-Oxygen Anesthesia for Tonsillectomies. J. H. Evans, Buffalo.—p. 158.
Colonic Anesthesia in Operations of Otolaryngologic Cases. E. W. Beach, Philadelphia.—p. 169.
Response of Vestibular Apparatus to Drugs. E. L. Ross and M. W. Fish, Chicago.—p. 175.
Otitis Media and Allergy. E. R. Lewis, Los Angeles.—p. 185.
Vertigo as Symptom. H. Moulton, Fort Smith, Ark.—p. 189.
Accurate Measurements of Amplitude of Vibration of Tuning Fork Prongs. R. Sonnenschein, Chicago.—p. 197.
Anatomy, Physiology and Pathology of Lacrimal Apparatus: Lacrimal Sac and Duct. H. V. Würdemann, Seattle.—p. 199.
Retropharyngeal Abscess. R. A. Barlow, Madison, Wis.—p. 205.
Complications of Otitis Media and Mastoiditis. E. H. Campbell, Philadelphia.—p. 209.
Infantile Mastoiditis with Gastro-Intestinal Symptoms: Two Cases. J. B. Costen, St. Louis.—p. 242.
Noncoalescent Mastoiditis: Four Cases. S. B. Marks, Lexington, Ky. —p. 251.
Nature of Nystagmus and Dizziness Occurring in Certain Positions of Head and Movements Other Than Those Around Long Axis of Body: I. Sommer, Vienna, Austria, and J. C. Yaskin, Philadelphia.—p. 260.
Positive Symptom of Mastoidits. M. Berger, New York.—p. 275.
Chronic Laryngeal Stenosis Complicating Laryngeal Diphtheria. R. J. Payne, St. Louis.—p. 276.
Toxic Otitis. J. J. Hompes, Lincoln, Neb.—p. 280.
Unilateral Blindness: Recovery After Sinus Operation. J. T. Dowling, Seattle.—p. 288.

Archives of Dermatology & Syphilology, Chicago

19: 533-712 (April) 1929

*Lymphoblastomas: Interrelationships. H. L. Keim, Ann Arbor, Mich. —p. 533.
Cancer of Skin Due to Occupation: Tar Carcinoma. W. J. O'Donovan, London, England.—p. 595.
Mechanistic Era in Dermatology. W. J. Highman, New York.—p. 607.
*Roentgen Treatment of Spine in Lichen Planus. J. R. Driver, Cleveland.—p. 620.
Phytopharmacologic Examination of Blood in Pemphigus and in Other Diseases of Skin. I. R. Pels and D. I. Macht, Baltimore.—p. 640.
Cistern Puncture. L. Jacobi, New York.—p. 651.
Amycotic Dermatoses Simulating Ringworm and Erosio Interdigitalis Blastomycetica. J. H. Mitchell, Chicago.—p. 659.
Lichen Planus in Infant Less Than Six Months Old. W. A. Pusey, Chicago.—p. 671.

Lymphoblastomas and Interrelationships.—Twenty cases of lymphoblastoma are presented by Keim, ten with autopsy studies. This group presents itself under multiple clinical pictures. The various clinical types encountered present interchangeable pathologic observations. The constant pathologic condition in all is a cell of the lymphocyte series. Until further information is forthcoming concerning distinct etiology, Keim feels that the term lymphoblastoma would seem to be justified on the basis of the genetic relationships existing between the members of this group.

Roentgen Treatment of Spine in Lichen Planus.—Twelve of the seventeen cases reported on by Driver were favorably influenced by roentgen treatment. Of these, ten, or 59 per cent, showed complete cures. These results compare favorably with those published by the majority of the investigators. Patients with acute generalized lichen planus show the best response to this mode of therapy. The results are unusually constant and, because of its simplicity, the method has many advantages over the more time-consuming one of direct roentgenotherapy. In patients with chronic generalized lichen planus, the effect is much more uncertain; one patient was cured and one was improved out of five in this series, and therefore it can hardly compare with the more constant results obtainable by direct irradiation. Encouraging results in acute and subacute localized hypertrophic lichen planus of the extremities lead the author to recommend the method, particularly if failure has resulted from direct roentgenotherapy or the use of other measures. In lichen planus of the mouth, the results are likely to be uncertain. The method is recommended when other measures fail. Concerning the choice of methods, in general, the filtered method gives more promise of success. The dosage used in this study was somewhat less than that used by most investigators. The number of treatments given is more than that reported by some, and the time required to produce a favorable result has been, as a rule, longer. Roentgen treatment of the spine is, then, recommended as a procedure of definite proved value in the treatment of lichen planus and is especially indicated in the acute generalized type. It can be recommended in all other types of the disease in which the patients do not respond to other methods of treatment.

Arkansas Medical Society Journal, Little Rock

25: 191-211 (April) 1929

Heart Disease Problem. O. C. Melson, Little Rock.—p. 191.
Tuberculosis. S. J. McGraw, El Dorado.—p. 194.

California and Western Medicine, San Francisco

30: 217-304 (April) 1929

Malaria. A. C. Reed, San Francisco.—p. 217.
*Achlorhydria Gastrica: Fifty Cases. W. D. Sansum and P. A. Gray, Jr., Santa Barbara.—p. 221.
*Liver Extract in Pernicious Anemia: Cases. H. A. Wyckoff and A. L. Bloomfield, San Francisco.—p. 225.
Endemic Goiter in California. H. H. Searls, San Francisco, and P. Sharp, Klamath Falls, Ore.—p. 231.
Unilateral Exophthalmos in Toxic Goiter: Cases. S. A. Durr, San Diego. —p. 233.
Radiation Treatment of Uterine Fibromyomas. A. Soiland, W. E. Costolow and O. N. Meland, Los Angeles.—p. 234.
*Mental Disturbances in Tumor of Brain: Cases. I. L. Meyers, Los Angeles.—p. 240.
Leukoplakia of Kidney Pelvis: Case. A. A. Kutzmann, Los Angeles.— p. 244.
Heart in Reference to Anesthesia. R. W. Langley, Los Angeles.—p. 249.
Sight-Saving Classes in California. F. H. Rodin, San Francisco.—p. 251.
Lure of Medical History: Christian Albert Billroth. E. J. Kilfoy, Los Angeles.—p. 255.
Intestinal Obstruction Relieved by Spinal Anesthesia: Case. H. Brunn and F. I. Harris, San Francisco.—p. 257.
Acute Streptococcic Laryngitis in Children: Cases. R. P. Seitz, San Francisco.—p. 259.
*Multiple Polyps of Jejunum with Intussusception: Case. W. W. Washburn, San Francisco.—p. 260.
Mesenteric Chylous Cysts: Case. L. A. Alesen, Los Angeles.—p. 261.

Achlorhydria Gastrica.—In all these cases Sansum and Gray advise the eating of citrus fruits, especially the lemon and the grapefruit. Orange juice apparently does not contain enough citric acid to be useful in this connection. Instructions to patients are to use grapefruit for breakfast or with one of the other meals. The grapefruit should be eaten first. Two ounces of lemon juice well diluted with water or 6 ounces of grapefruit juice likewise well diluted with water should be taken with the other meals. A part of the fruit juice should be sipped before any food is eaten and the remainder sipped during the meal, so that all of the food is mixed with the acid. The grapefruit and fruit juices may be sweetened with sugar to taste, as this does not neutralize the acid. This simple procedure of taking a fruit cocktail with each meal has proved efficacious in all but three cases in this series. Forty-seven patients have reported prompt and marked improvement; one reported a frank failure; one left the hospital prematurely, and the other is still under observation without change in his symptoms. However, the latter patient has a stubborn ulcerative colitis along with the achlorhydria. Some of these cases have been observed for a period of two years. The adjustment is so delicate in some cases that if the sour fruit juice is omitted at any one meal the diarrhea returns in a few hours. Also if from one-half to one hour elapses between drinking the juice and the taking of the rest of the meal, diarrhea may result. In instances in which lemon or grapefruit juice is not available, the patient is advised to use vinegar in identically the same manner as the citrus juice.

Liver Extract in Pernicious Anemia.—Extract of liver prepared by the method of Cohn and Minot was effective in producing satisfactory remissions in five consecutive cases of pernicious anemia reported on by Wyckoff and Bloomfield. The course of events was identical with that observed when whole liver is fed. The extract was effective regardless of the character or the amount of food which was taken. Extract equivalent to about 600 Gm. of liver daily was necessary to produce satisfactory remissions; about one third of this dose maintained the blood count and well being of the patient. No definite effect on the neurologic changes or on the gastric anacidity was observed.

Mental Disturbances in Tumor of Brain.—Meyers reports six cases to illustrate that increase in intracranial pressure does not of itself produce the mental disturbances that are associated with tumors of the brain. The mental disturbances associated with such lesions are to be regarded as focal phenomena, being produced by an impairment of specific function in different regions of the brain. The occipital lobe plays little if any part in the psychic integrity of the individual, normal mentality being compatible with almost complete destruction of this lobe. Lesions of the temporal lobe on either side of the brain are associated with a characteristic type of mental disturbance which manifests itself in an incapacity to receive mental stimuli and a slowing down of all thought processes. Lesions of the frontal lobe produce mental disturbances which appear to be mainly the result of a loss of inhibition by the higher centers and overactivity of the subordinate parts of the brain. Visual hallucination of the elaborated type may be associated with tumors of the cerebellum. This may possibly be explained as the result of pressure by the tumor on the corpora quadrigemina and geniculate bodies.

Multiple Polyps of Jejunum with Intussusception.—On the basis of a diagnosis of intestinal obstruction, Washburn performed an operation and found an intussusception high up in the small bowel. On closer examination it was apparent that there were multiple intussusceptions of the upper portion of the jejunum. The two lower ones were reduced by gentle traction. The upper and larger one was irreducible and greatly discolored. The lower one, which was reduced, consisted of a double invagination, so that the bowel wall below, after reduction, was greatly discolored and stretched to the size of a coat sleeve. On palpation a few inches above the irreducible mass,

a small tumor was felt resembling impacted bowel content. Movement of the mass was restricted, and the bowel wall definitely dimpled in with downward traction on the mass. Three similar masses were also felt lower in a portion of the intestines in which reduction of a double invagination had been made. Resection of a little more than 5 feet of jejunum was done from above the first tumor mass, which was felt about 12 inches from the duodenum, and a lateral anastomosis was made as quickly as possible. Four months after operation the patient was in excellent health. The pathologic diagnosis was multiple polypi. There was no evidence of a malignant condition.

Endocrinology, Los Angeles

13: 1-108 (Jan.-Feb.) 1929

Endocrine Glands: V. Suprarenals. C. H. Lawrence and A. W. Rowe, Boston.—p. 1.
Relationship of Iodine to Thyroid Hyperplasia and Function. J. E. Else, Portland, Ore.—p. 40.
Stimulation Effect of Testicular Substance on Sugar Metabolism. D. J. Verda, W. E. Burge and F. C. Green, Urbana, Ill.—p. 46.
Structural Changes Which Take Place in Thyroid of Guinea-Pigs During Process of Compensatory Hypertrophy Under Influence of Iodine Administration. L. Loeb, St. Louis.—p. 49.
Influence of Anterior Pituitary Extract on Sex Glands and Growth. E. Larson, O. Bergeim, D. J. Barber and N. F. Fisher, Tuscaloosa, Ala.—p. 63.
*Dementia Praecox as Endocrinopathy. J. L. McCartney, New York.—p. 77.
Oral Administration of Epinephrine. G. Giragossintz and H. Mackler, Berkeley, Calif.—p. 88.
Infra Red Sterility. B. Cunningham and G. Osborn, Durham, N. C.—p. 93.

Dementia Praecox as Endocrinopathy.—McCartney states that the literature, in general, supports the contention that endocrinopathy is consistently found in cases of dementia praecox. Twenty-three eunuchs examined by him showed typical dementia praecox or schizoid character, good intelligence and orientation, but distinct changes in the affect. Some retained sexual function but without libido. Of seventy living schizophrenic males examined, at least 60 per cent were eunuchoid in type and only 5.7 per cent had apparently normal testes; there were also other signs of endocrine dysfunction. A large number functioned sexually. Of forty living female subjects with dementia praecox, 52.5 per cent had undoubted ovarian disease, although some had been pregnant. Pathologic examination of 158 males and twenty-four females with schizophrenia disclosed marked endocrine changes. Cadavers of catatonic patients over 50 years of age were not seen. No consistent pathologic or biometric changes were found in the endocrine glands except in the gonads, although only a small percentage of the subjects had normal suprarenals. The thyroid was consistently normal or hypertrophied in all cases of catatonic dementia praecox. In the cases of dementia praecox no normal ovaries and only a small percentage of normal testes were found. Tuberculosis was the lethal disease in 39.9 per cent of the men but in only 15 per cent of the women. Myocardial degeneration was consistently present in a large percentage of both the males and the females with dementia praecox, and pneumonia was a frequent cause of death in both sexes. Almost every patient with dementia praecox gave a history of having had one or more of the severe toxemias. At least a fourth of the subjects had inherited defective somatoplasm. This study as a whole indicates that dementia praecox is primarily an endocrinopathy in which the gonads are consistently degenerated or hypofunctioning. Sexual activity and fecundity are not adequate criteria of gonad incretion; rather the state of the interstitial lipoid should be taken as the criterion of normality. Supplying the endocrine deficiency should assist in the social adjustment of the victims of dementia praecox.

Indiana State M. Assoc. Journal, Fort Wayne

22: 135-178 (April 15) 1929

Undulant Fever. A. S. Giordano, South Bend.—p. 135.
*Cesarean Section Mortality in Indianapolis. D. L. Smith, Indianapolis.—p. 141.
Thrombophlebitis of Cavernous Sinus. D. H. Richards, Vincennes.—p. 145.
Dislocation of Hip with Fracture of Posterior Rim of Acetabulum. R. A. Griswold, Cleveland, and C. R. Herd, Peru.—p. 150.
Peptic Ulcer. L. W. Elston, Fort Wayne.—p. 153.
Vanishing Country Doctor. W. F. McBride, Dayton.—p. 159.

Cesarean Section Mortality in Indianapolis.—Maternal mortality following cesarean section in four Indianapolis hospitals for the year ending Nov. 1, 1928, was 11.3 per cent according to Smith. The individual hospital rates were 0.0, 3.8, 13.3 and 17.2 per cent. Fetal death rates following cesarean section varied from 0.0 to 13.3 per cent, the average being 8.7 per cent. The incidence of cesarean section varied among hospitals from 1 in 29 to 1 in 16.4, the average being 1 in 19. Eleven low two-flap cesarean sections are reported. These were done on potentially infected women for whom the classic type of operation would have been unsafe. There were no fetal or maternal deaths, and no sepsis or wound infection.

Journal of Immunology, Baltimore

16: 283-419 (April) 1929

*Immunologic Investigations in Tropical Sprue in Porto Rico: V. Skin Tests with Various Food Preparations. C. Weiss and O. C. Mandry, San Juan, Porto Rico.—p. 283.
Heterogeneity of Streptococci Isolated from Sputum. S. B. Hooker and L. M. Anderson, Boston.—p. 291.
Ricinoleated Vaccines. A. Kozlowski, Albany, N. Y.—p. 357.
Experimental Studies with Pyocyaneus Filtrates. E. J. Oesterlin, Milwaukee.—p. 359.
Presence of Heterophile (Forssman's) Antigen in Bacteria of Paratyphoid Dysentery Group. C. W. Jungeblut and A. T. Ross, Stanford University, Calif.—p. 369.
Effect of Formalin on Botulinum Toxins A, B and C. R. Graham and F. Thorp, Jr., Urbana, Ill.—p. 391.
Antigenic Substances of Clostridium Botulinum XXXIII: I. Complement Fixing Substances in Alcoholic Extracts. J. Lommel and J. B. Gunnison, San Francisco.—p. 403.
Antibody Studies in Serum Sickness: I. Prausnitz-Küstner Reaction. L. Tuft and S. G. Ramsdell, Philadelphia.—p. 411.

Immunologic Investigations in Tropical Sprue in Porto Rico.—An investigation was made by Weiss and Mandry to determine whether the untoward gastro-intestinal reactions observed in patients with sprue (diarrhea, tympanites and flatulence) after eating certain types of food might be of the nature of specific hypersensitiveness. A careful survey was made of the foods commonly eaten by the people of Porto Rico and representative types were selected for cutaneous tests. These include proteins prepared from rice, beans, pork, codfish and coconut, sugars (saccharose and fructose), fats and oils (lard and butter), starches prepared from rice, potatoes and beans, and local spices and coffee. These results were clearly negative and indicate that the untoward digestive symptoms of patients with sprue are not due to any specific sensitization to any food products.

FOREIGN

An asterisk (*) before a title indicates that the article is abstracted below. Single case reports and trials of new drugs are usually omitted.

British Medical Journal, London

1: 671-714 (April 13) 1929

Treatment of Cancer of Rectum with Radium. C. Gordon-Watson.—p. 671.
Constructive Epidemiology. R. Ross.—p. 673.
*Relation Between Recurrent Albuminuria, Chronic Nephritis and Toxemia of Pregnancy. G. F. Gibberd.—p. 674.
*Causes of Spinal Compression. J. R. Beal.—p. 677.
*Congenital Retroperitoneal Hernia. F. W. Sumner.—p. 678.
Ovariotomy in Women Over 70 Years of Age: Two Cases. L. Williams.—p. 679.
New Daylight Lamp for Actinotherapy and General Illumination. A. Eidinow.—p. 680.
Influence of Movement on Trunk of Human Body. A. M. Forbes.—p. 682.
Moniliasis and Tuberculosis. R. Craik.—p. 682.
Köhler's Disease of Second Metatarsophalangeal Joint. P. Cave.—p. 683.

Relation Between Albuminuria, Chronic Nephritis and Toxemia of Pregnancy.—Gibberd is of the opinion that toxemia of pregnancy can be regarded as the cause of all first attacks of pregnancy albuminuria in previously healthy patients. The renal injury in these women is purely secondary to the toxemia. As a result of this toxemia, a certain proportion (about 10 per cent) develop frank chronic nephritis and bear the stigmas of this disease, whether or not they become pregnant again. A further proportion (about 40 per cent) recover their kidney function completely after delivery, and subsequently have normal pregnancies without albuminuria. The remainder

(about 50 per cent) recover their kidney function only so far as to be free from signs of renal disease in the intervals between pregnancies. If they subsequently became pregnant, they suffer with recurrent albuminuria. Recurrent albuminuria may be looked on as due partly to a subliminal pregnancy toxemia, and partly to a preexisting occult nephritis caused by the first toxemic pregnancy. Pregnancy itself is the most delicate test of renal function. Many cases of albuminuria of pregnancy are due to a mixture of both the "nephritic" and the "toxemic" elements. Although the incidence of chronic nephritis and of recurrent albuminuria can be influenced favorably by earlier induction of labor in the first attack of toxemia, this measure by no means solves all the difficulties.

Causes of Spinal Compression.—Beal reports four cases: extradural tumor; endothelioma; intramedullary tumor; tuberculosis and syphilis.

Congenital Retroperitoneal Hernia.—Sumner reports the case of a man, aged 66, who had suffered for years from occasional attacks of abdominal discomfort, which he described as "indigestion," and which could usually be attributed to certain foods, especially pastry, after the ingestion of which he would experience epigastric discomfort, lasting from a few hours to one or two days. In January, 1921, the appendix was removed. There was no mention of any other abnormal condition in the abdominal cavity having been noticed. In January, 1926, he was admitted again suffering from intestinal obstruction. The abdominal cavity was opened; no bowel came into view, but a large, flat, tense, elastic swelling, with the great omentum spread over it, was in contact with the anterior abdominal wall. When the great omentum was pushed upward there was exposed to view a large, smooth, shiny sac wall, in which distended coils of intestine could be seen tightly packed. When the lower portion of this was explored, it was found to extend into the pelvis, reaching to the level of the promontory of the sacrum. The fingers could be passed behind the sac round its lower convex surface, and on following the sac upward anteriorly it was found that the transverse mesocolon was arching over it and deeply indenting it. There was only a small portion of the terminal ileum free in the general peritoneal cavity, and this, together with the cecum and the ascending and descending colons, was collapsed; along the large bowel were small scybala at intervals. Coursing in the front wall of the sac from below upward and slightly to the right were three small long blood vessels. Evidently the whole, or practically the whole, of the small intestines and the mesentery were packed away in the sac. A hole was made in the front wall of the sac, in a bloodless area, and the intestines popped out; these were not greatly distended, and were only slightly congested. Five different portions of intestine, acting as a constricting band, showed marks of this pressure in linear chocolate colored discolorations; each mark was about an eighth to a fourth of an inch wide, and varied from 1 to 3 inches in length; in no case was the viability of the bowel impaired. The constricting mesocolon could now be felt to be quite free from the sac wall, it being possible to sweep the finger under it from one side to the other of the 3 inch arch. The constricting band was loosened and the bowel released. On recovering from the anesthetic the patient began to complain of increasing pain in the right side of the chest. Notwithstanding appropriate treatment, his breathing became more and more labored and quickened; he had crepitations at the right base, and died in twenty-four hours. Only a limited postmortem examination was allowed. The small intestine with its mesentery was not, as is normally the case, free in the general peritoneal cavity, but was confined in a space at the back of the abdomen. It would appear that through an error in development an adventitious fold of peritoneum extended down from the duodenojejunal flexure and became fused below to the peritoneum covering the inferior leaf of the mesentery. The small intestine, mesentery and posterior abdominal wall had their usual peritoneal covering; this space was a closed cavity, except for the aperture giving exit to the ileum; the duodenojejunal flexure, instead of emerging from behind the peritoneum into the general peritoneal cavity, emerged into this compartment. The posterior wall was a fixure, and could not expand; the anterior wall could, and did so, in every direction except at its upper end; but here the pressure of its contained bowel kept open the space between the left central portion of the pancreas and the corresponding portion of the posterior abdominal wall, each being covered with its own layer of peritoneum. These normally fuse together. In this region, also, the normal development of the transverse mesocolon was interfered with; it remained in its central portion as a bridge passing over the sac. For sixty-six years the small bowel had functioned satisfactorily, enabling the patient to carry on his arduous duties without any great disability; but, finally, an indiscretion in diet had converted the potential stricture into an actual one, and a vicious circle had been set up between an ever-increasing distention of the sac and an ever-increasing pressure of the bridge.

Medical J. Australia, Sydney

1: 405-440 (March 30) 1929

Bacteriophage in Its Clinical Aspects. F. M. Burnet.—p. 406.
Recent Advances in Immunization. E. L. Morgan.—p. 410.
Scarlet Fever. A. H. Tebbutt.—p. 414.
*Chorion Epithelioma in Male. J. Tansey and L. Utz.—p. 419.
Treatment of Cancer of Lip by Radium Needles. R. G. Brown.—p. 421.
*Epistaxis with Unusual Sequelae: Case. A. O. Davy.—p. 423.

Chorion Epithelioma in Male.—Tansey and Utz relate the case of a man, aged 25, who complained of pain in the chest, general weakness and loss of weight. The pain had commenced two months previously and was situated in the precordium without any definite lines of radiation. Fourteen days subsequent to the onset of pain there had been a brisk hemoptysis of bright red blood. There was a loose, productive cough and the sputum was frequently blood stained. There was no history of night sweats. Both breasts were considerably enlarged and both testicles were small, but testicular sensation was retained. There was deficient respiratory expansion of the left side of the chest and a bulging of the anterior chest wall on the left side in the region of the third, fourth and fifth ribs. There was impairment of the percussion note over both sides of the chest, the percussion note over the lower part of the left side of the chest having a flat quality. The breath sounds were distant, mainly bronchial in character and with numerous coarse and fine accompaniments. Examination of the other systems revealed nothing of importance. Apart from the tumefaction of the breasts there was no alteration in any of the secondary sexual characteristics. Some deeply blood stained fluid was removed from the left side of the chest. Cytologic and bacteriologic examination of this fluid revealed nothing of importance. A searching clinical examination failed to reveal any evidence of a primary neoplasm outside the thoracic cavity. The patient died twelve days after admission to hospital. At the necropsy examination of the abdominal cavity gave mostly negative results. When the thorax was opened a large amount of blood stained fluid was found on the left side and a small amount on the right side. The heart and pericardium were considerably displaced to the right. On the anterior surface of the left lung there was an exudate of old blood clot and fibrin and an obvious tumor. A preliminary diagnosis of adenocarcinoma of a substernal thyroid with metastatic involvement of the lungs was made. A large, spherical, hemorrhagic, friable and partially necrotic tumor occupied and replaced the entire upper lobe and the major portion of the lower lobe. The remaining portion of the lower lobe contained many smaller hemorrhagic tumors. The right lung also contained numerous small spherical tumors. In all tumors lung tissue was practically absent and was almost entirely replaced by hemorrhages, semiorganized blood clot and by an invasion of large epithelial cells varying somewhat in size and indistinguishable from chorionic cells, both forms, namely, syncytial cells and Langhans' cells, being observed. The characteristic arrangement was observed. The vessels in the tumors were represented by blood spaces, and in many cases the chorionic cells were most abundant around these immature vessels.

Epistaxis with Unusual Sequelae.—Davy's patient complained of severe epistaxis of spontaneous origin off and on for four days. Repeated packing of the nose failed to control the bleeding until two postnasal plugs were inserted under general anesthesia. Three days later the patient complained of earache in both ears. The next day there was slight tenderness over both mastoid processes. Both drums bulged and were yellow.

Double paracentesis was performed and profuse purulent discharge was obtained from the two sides. Three days later there was definite double mastoiditis with considerable pain and tenderness over both mastoids. Owing to the patient's poor condition both mastoids were opened under local anesthesia. The patient eventually made a complete recovery. Davy concludes that the aural infection was undoubtedly secondary to the repeated packing of the nose and the postnasal plugging.

Archives Franco-Belges de Chirurgie, Brussels

31: 169-260 (March) 1929. Partial Index

*Polycystic Liver and Kidneys in Porencephalia. P. Delore and Croizat.—p. 177.
Fifty Cases of Tubal Pregnancy. M. le Jemtel.—p. 186.
Painful Kyphosis. L. Lamy.—p. 191.
Rôle of Periosteum in Bone Grafts. M. A. Trèves.—p. 213.
*Late Appearance of Disturbances of Gait in Congenital Incomplete Dislocation of Hip. A. van Haelst.—p. 220.
*Congenital Scoliosis. Blankoff.—p. 225.
*Sacralization of Fifth Lumbar Vertebra. Delchef.—p. 229.
Fracture of Base of First Metacarpal. P. Marique.—p. 232.

Polycystic Liver and Kidneys in Porencephalia.—Delore and Croizat report a case of hepatomegalia in a tuberculous patient, with left infantile hemiplegia. The liver filled the whole abdomen, leaving free only the left iliac fossa; however, digestive disturbance, icterus or ascites was not observed. The patient died at the age of 55 from pulmonary tuberculosis (spontaneous pneumothorax), and at necropsy polycystic kidneys, porencephalitis of the right cerebral hemisphere and a polycystic liver weighing 4 Kg. were found. In the liver the cysts of various sizes were surrounded by inflammatory tissue, rich in cells; there were also inflammatory lesions of the vessels and cirrhotic lesions of the hepatic parenchyma. The authors think that the coexistence of porencephalia, polycystic kidneys and polycystic liver with traces of inflammatory reaction, in the same patient, may be considered as a new argument in favor of the syphilitic etiology of polycystic disease, because of the frequency of congenital syphilis in porencephalia.

Late Appearance of Disturbances of Gait in Congenital Incomplete Dislocation of Hip.—Van Haelst calls attention to the possibility of the late appearance of the first functional disturbances in congenital incomplete dislocation of the hip. In three cases reported by him (one man and two women) locomotion became painful and impossible without some kind of support at the age of 45, 55 and 61 years, respectively. The congenital lesions were complicated in all cases by a dry arthritis.

Congenital Scoliosis.—Blankoff reports a case of scoliosis with the maximum convexity at the third lumbar vertebra (2 cm. to the left) in a girl, aged 15½ years, with premature sexual development and with a spina bifida occulta at the level of the fifth lumbar vertebra.

Sacralization of the Fifth Lumbar Vertebra.—Delchef recommends surgical intervention in all cases of pains caused by sacralization of the lumbar vertebrae, even if the pains are not the characteristic root pains. In two cases of sacralization of the transverse process of the fifth lumbar vertebra reported by him, the pains disappeared after the resection of the corresponding transverse process, by the method of Bonniot.

Archives des Maladies du Cœur, etc., Paris

22: 129-208 (March) 1929

*Mycosis of Spleen. A. Nanta.—p. 129.
Paroxysmal Bradycardia with Syncope and Without Disturbances of Conductivity in Bundle of His: E. Géraudel.—p. 163.
*Abdominal Aortitis with Referred Pain. B. Theodoresco and I. Daniel.—p. 172.

Mycosis of Spleen.—Mycetoma of the spleen with a large spleen full of siderous, mycotic nodules, with a congested liver, ascites, bronchitis and pleuritis, anemia, leukopenia, icterus and hematemesis, is rarely observed, but mycotic hypertrophy of the spleen is frequently reported in pigs (actinomycosis) and in men (Sutter's trichophytosis). With the fungi secured from human mycosis of the spleen, experimental mycotic hypertrophy of the spleen can be produced in rabbits (Pivoy). Nanta reports two more cases of experimental mycotic hypertrophy of the spleen, which he produced in rabbits by means of repeated subcutaneous and intraperitoneal injections of *Aspergillus fumigatus*. Siderosis of the spleen creates a favorable condition for the splenic localization of the fungi; therefore in experimental mycosis of the spleen, the rabbits are treated with iron saccharate before the mycotic inoculations, and in men a certain degree of siderosis of the spleen is usually caused by infection. Some kinds of mycosis of the spleen are not easily recognized because certain hyaline, basophilic or acidophilic forms of mycelium are easily mistaken for fibers of connective tissue, especially when both the connective tissue and the mycelium are impregnated with siderous or calcareous deposits.

Abdominal Aortitis with Referred Pain.—Theodoresco and Daniel report a case of aneurysm of the abdominal and the thoracic aorta in a man, aged 35, who had paroxysmal attacks of severe epigastric pain, which were relieved by amyl nitrite, and an unusual occurrence of faintness and an acute pain in the fourth intercostal space when pressure was made on the abdominal aorta just above the umbilicus. The pain disappeared instantly after the pressure was discontinued. The authors think that the symptom was due to a sudden dilatation of the left ventricle, caused by an increase in the blood pressure during the compression of the abdominal aorta.

Bulletins et Mém. de la Soc. Nat. de Chirurgie, Paris

55: 421-458 (March 23) 1929

Accident in Local Anesthesia. G. Métivet.—p. 422.
*Pathologic Fracture of Humerus: Osteoclastic Sarcoma. Wolfromm and Vanlande.—p. 423.
Tubal Pregnancy. Brugeas.—p. 429.
Backward Dislocation of Ulna with Fracture of Diaphysis of Radius. M. Vanlande.—p. 435.
*Unilateral Effect in Spinal Anesthesia. D. Ferey.—p. 438.
Roentgenography of Mobile Duodenum. P. Duval and H. Béclère.—p. 440.
Treatment of Amebic Abscesses of Liver. H. Costantini.—p. 447.
Surgical Treatment of Aneurysm of Internal Carotid by Means of Aponeurotic Graft. R. Le Fort and J. Piquet.—p. 451.
Acute Arthritis of Hip Joint Complicating Osteomyelitis of Ischium. R. Le Fort and J. Piquet.—p. 453.
Myeloma of Skull. A. Lapointe.—p. 456.

Fracture of Humerus at Site of Cystic Osteitis: Osteoclastic Sarcoma Cured by Curettage Without Bone Graft.—Two cases reported by Wolfromm and Vanlande show that in fractures occurring at the site of bone tumors, union of the fragments may be obtained without a bone graft. In the case reported by Wolfromm, the humerus was fractured almost in the middle of the diaphysis, at the site of a cystic osteitis. It was a closed fracture, but a small incision was made to secure, by curettage, some particles of bone for microscopic examination. After the closure of the wound, the arm was immobilized by means of two splints, and two weeks later the fragments had united, with, however, a roentgenologic picture of the persistence of the cyst in the middle of the callus. In the second case, reported by Vanlande, not only was the rapid evolution of a tumor of the head of the humerus, causing severe pain and complete loss of functions of the arm, checked by simply curetting out the diseased part of the bone, but the process of ossification was so intensely stimulated by the curettage that the patient was completely cured in two months. The restoration of function was almost perfect, nothwithstanding the postoperative fracture that occurred at the site of the curettage, because the bone had been reduced by curettage to a thin shell and because no bone graft had been made.

Unilateral Effect in Spinal Anesthesia.—Ferey reports a case of fracture of the leg, in which only one leg was anesthetized by means of spinal anesthesia. Eight-hundredths gram of crystalline procaine hydrochloride dissolved in spinal fluid was injected easily into the spinal canal between the third and fourth lumbar vertebrae, the patient lying on the right side. Ten minutes after the injection had been made the left leg was completely anesthetic up to the crest of the ilium, and the open reduction of a compound fracture of the tibia and fibula of the left leg was performed without any difficulties and quite painlessly. In one hour the sensibility returned to the left leg. The right leg was not anesthetic at any time during the intervention. The author thinks that because the patient was in the right lateral decubitus position, the point of the needle probably penetrated more to the left side of the spinal canal, and the anesthetic solution remained in the left half of the spinal canal, probably because of the existence of a longitudinal septum dividing the spinal canal in two parts.

Journal de Chirurgie, etc., Brussels

27: 281-328, 1928

Thrombophlebitis of Cavernous Sinus. V. Cheval and L. Delrez.—p. 283.
Tuberculin Therapy in Surgical Tuberculosis. Moons and Coryn.—p. 285.
*Excision of Superior Cervical Sympathetic Ganglion in Facial Paralysis. R. Albert.—p. 285.
*Surgical Treatment (Trendelenburg's Operation) of Postoperative Embolism of Pulmonary Artery. De Harven.—p. 291.
Bone Graft and Osteosynthesis in Delayed Union of Fracture of Humerus. De Harven.—p. 295.
Osteosynthesis in Fracture of Neck of Femur in Old Persons. De Harven. —p. 295.
Treatment of Varicose Veins by Sclerosing Injections of Quinine and Urea. Delanne.—p. 304.
*Thrombophlebitis of Cavernous Sinus, Cured by Operation. L. Christophe. —p. 312.

Extirpation of Superior Cervical Sympathetic Ganglion in Facial Paralysis.—Albert excised the superior cervical sympathetic ganglion in a man, aged 37, for complete, right-sided facial paralysis, caused by a fracture of the base of the skull. The day after the operation enophthalmos, miosis and narrowing of the palpebral fissure were observed on the side of the operation, and the patient could open and close his eye, but not completely. One month later the tonus of the paralyzed half of the face was considerably increased, some slight movements of the lips, nose and forehead were observed, and the eye was well protected by the mobility of the eyelids.

Surgical Treatment (Trendelenburg's Operation) of Postoperative Embolism of Pulmonary Artery.—In three cases of embolism of the pulmonary artery, which occurred in patients from nine to twelve days after various operations, de Harven immediately performed a resection of the sternal end of the third rib, pushed away the pleura, opened the pericardium and through an incision in the wall of the pulmonary artery near the bifurcation extracted a long blood clot in each case. None of the patients recovered.

Thrombophlebitis of Cavernous Sinus, Cured by Operation.—Christophe reports a rare case of the surgical cure of thrombophlebitis of the right cavernous sinus. The disease developed slowly as a complication of the treatment of caries of the first right premolar, and in four months the patient had fever, severe shooting pains in the right side of the head, chemosis and exophthalmos of the right eye, which was almost immobilized and completely blind (from internal hemorrhage). The patient was in poor general condition. Under local anesthesia the internal carotid was crushed by means of a clamp and the clamp was left in place. After this, under general anesthesia, the cavernous sinus was opened, through the external wall of the orbital fossa, and drained. The drain was removed in fifteen days, but the discharge of the pus continued for a long time. The patient recovered completely.

Lyon Médical, Lyons

143: 313-348 (March 17) 1929

*Dyspnea on Exertion in Cardiac Diseases. L. Gallavardin.—p. 313.

Dyspnea on Exertion in Heart Diseases.—Gallavardin draws distinctions between so-called dyspnea and polypnea in cardiac patients, both conditions being usually included under the term "dyspnea on exertion." Polypnea is a normal reflected increase of both the number and the volume of the respirations in response to a demand for increased oxygenation during exercise. It becomes pathologic only when it is caused by slight exertion, thus revealing cardiac weakness, and may end in cardiac dilatation and pulmonary edema. Subjectively it is expressed by breathlessness, usually without pain. Dyspnea, on the contrary, is characterized subjectively by a feeling of suffocation and more or less pronounced precordial or irradiated painful sensation. The mental and nervous condition of the patient plays a more important rôle in the production of dyspnea than does exertion, and the attacks of dyspnea may eventually develop into the attacks of real angina pectoris. Dyspnea and polypnea may be observed on exertion in the same cardiac patients, simultaneously or in succession, depending on the predominance of the myocardial or vascular disturbances of the heart. The author reports a case of "dyspnea" in a syphilitic woman, aged 46, who for several years had attacks of slight suffocation only on exertion (especially in cold, windy weather), which later developed into characteristic attacks of angina pectoris. At this time, on physical examination, syphilitic aortitis and disturbances of the eye reflexes were found.

Marseille-Médical, Marseilles

66: 265-312 (Feb. 25) 1929

Treatment of Varicose Veins of Legs. J. Poucel.—p. 265.
*"Flat Tongue" in Congenital Syphilis. C. Roche.—p. 287.
Effect of Mental Condition on Spasm of Colon. H. Gaehlinger.—p. 291.
Emergency Venesection (Technic). S. Icard.—p. 303.

"Flat Tongue" in Congenital Syphilis.—Under the term "flat tongue," Roche describes a condition caused by paralysis of the transverse lingual muscles: the patient cannot raise the lateral edges of the tongue to form a roll; the other movements of the tongue, however, are normal. The author observed this condition in nine out of ten patients with congenital syphilis who were treated by him for interstitial keratitis. In patients with acquired syphilis the condition was observed occasionally in the late period of the disease. The author thinks that flat tongue is as valuable a sign of congenital syphilis as are Hutchinson's teeth and interstitial keratitis.

Paris Médical

1: 281-296 (March 23) 1929

*Vaccinotherapy in Undulant Fever. H. Cambessédès and G. Garnier. —p. 281.
Osteosynthesis in Fracture of Both Bones of Forearm. J. Baillis and A. Folliasson.—p. 291.

Vaccinotherapy in Undulant Fever.—Cambessédès and Garnier report complete cure of undulant fever after a single injection of vaccine (*Brucella abortus*) in three patients and after two and three injections, respectively, in two patients. They obtained the same results in twenty-four more patients. They used as a vaccine an antigen prepared from the proteins extracted from dried *Brucella abortus*, 1 cc. of the antigen corresponding to at least 500 milliards of the micro-organisms. Good results can be expected only in patients in whom the subcutaneous administration of the vaccine is followed by an intense general reaction. Therefore the use of large doses of the vaccine is recommended; and usually the failure of the treatment may be explained by the administration of too small doses of the vaccine. The vaccine is administered only in patients with a positive skin reaction (to *Brucella abortus*), and the dose of the vaccine administered should correspond to the intensity of the reaction. On the average the first dose is from 0.2 to 1 cc. of the vaccine injected intramuscularly. If the condition is not cured by the first injection, the dose of the vaccine for the subsequent injections should be doubled each time.

1: 297-312 (March 30) 1929

Primary Anaerobic Septicemia. P. Teissier, J. Reilly, E. Rivalier and F. Layani.—p. 297.
*Cancer of Stomach with Bulimia. N. Prevedourakis.—p. 306.

Cancer of Stomach with Bulimia.—Prevedourakis reports six cases of cancer of the stomach, in which the patients had bulimia. The diagnosis of cancer was confirmed by the laboratory and the roentgenographic examinations and by a laparotomy in one case. Therefore the author thinks that there exists a bulimic form of cancer of the stomach.

Presse Médicale, Paris

37: 385-400 (March 23) 1929

*Gastrorrhagia in Primary Chronic Splenomeglia. R. Grégoire and P. Émile-Weil.—p. 385.
Clinical Value of Ammonium Coefficient. M. Polonovski and P. Boulanger.—p. 387.
*Perforative Fractures of Acetabulum. J. Cottalorda.—p. 388.

Gastrorrhagia in Primary Chronic Splenomegalia.—Grégoire and Émile-Weil think that in the presence of gastrorrhagia occurring in a seemingly healthy person, one should not be satisfied with the diagnosis of latent gastric ulcer until splenomegalia has been eliminated, because gastrorrhagia is often observed not only in the thrombotic forms of splenomegalia but also in primary splenomegalia. The authors report four more cases of primary splenomegalia with gastrorrhagia; in only one of sixteen patients with splenomegalia who were operated on by them was a thrombotic form of splenomegalia observed. Usually, the splenic vein was extremely dilated, with thin and fragile walls, and the dilatation was limited to the splenic venous system, while the veins of the stomach and of the intestines seemed to be normal. Moreover, if the gastrorrhagia in splenomegalia were caused by a thrombotic process in the portal vein, splenectomy would not give good results in the treatment of this kind of hemorrhage.

Perforative Fractures of Acetabulum. — Cottalorda studied 107 cases of perforative fractures of the acetabulum, of which ten were treated by him. In eighty-six cases whose complete evolution was observed by the author, cure occurred in 31.3 per cent, death in 27.9 per cent and ankylosis in 40.6 per cent.

Revue Française de Gynécologie et d'Obst., Paris

24: 145-192 (March) 1929

*Autovaccinotherapy in Gonorrhea in Pregnant Women. J. Audebert and J. B. Giscard.—p. 145.
Treatment of Eclampsia with Barbital Derivative. A. Laffont and J. Larribère.—p. 148.
*Severe Trauma in Delivery. M. Reeb.—p. 155.
Tetanus in the New-Born. H. Rocher and Rudeau.—p. 159.
Gangrene of Uterus. R. Keller.—p. 167.
"Reflexotherapy" in Retrodeviations of Uterus. J. Regnault.—p. 171.

Autovaccinotherapy in Gonorrhea in Pregnant Women.—Audebert and Giscard report three cases of gonorrheal cervicitis (with gonorrheal arthritis in two cases) in pregnant women, which were rapidly cured by autovaccinotherapy, without any bad effect on the pregnancy. The authors obtained complete cure of the condition in 95.5 per cent of the eighty-one patients with gonorrhea refractory to other treatment. They recommend the use of large doses (up to 25 milliards of gonococci per dose) of the autovaccines prepared from the five day cultures of gonococci cultivated on the Giscard culture medium, the products of the lysis of the cocci also being used. The autovaccines used were thus both antimicrobic and antitoxic.

Severe Trauma in Delivery.—Reeb reports a case of perforation of the posterior vaginal culdesac and prolapse of the sigmoid during the attempt by a physician to deliver a placenta that was not expelled two hours after the delivery of a fetus in a primipara, aged 20. The woman was saved by laparotomy with hysterectomy, resection of 45 cm. of the colon and an artificial anus.

Revue Médicale de la Suisse Romande, Lausanne

49: 193-248 (March 25) 1929

Acute Perforation of Gastroduodenal Ulcer. P. Decker.—p. 193.
*Aloe Treatment of Stings of Hymenoptera. A. Pugnat.—p. 205.
Forcible Emergency Delivery by Delmas Method. A. Secrétan.—p. 206.

Use of Aloes in Treatment of Stings of Hymenoptera.—Pugnat used with good results early local applications of 20 per cent solution of powdered aloes in 60 per cent ethyl alcohol for the treatment of bees', wasps' and hornets' stings. The pain is checked almost immediately, and the swelling either does not appear or is greatly reduced.

Boletín de la Soc. de Obst. y Ginec. de Buenos Aires

7: 439-529 (Dec. 17) 1928. Partial Index

*Two Cesarean Sections in Uterus Didelphys. E. Argonz and T. A. Chamorro.—p. 450.

Two Cesarean Sections in Uterus Didelphys.—In the case described by Argonz and Chamorro the patient's gravid uterus was deviated toward the right side. The fetal head rested in the left iliac fossa. Cesarean section was performed. The length and deviation of the uterus toward the right was very noticeable. On the right side the adnexa were present but on the left side they were absent. A living baby boy weighing 3,500 Gm. was delivered, with the placenta and the membranes. The puerperium was afebrile and normal. Twenty-five days later, the authors noted a heavy vaginal septum, which could easily be pushed to either side, and two cervices. A diagnosis of duplex uterus, with one of the tubes atrophic, was made. One year later the patient returned in the eighth month of pregnancy. This time the uterus was deviated to the left. Hysterotomy was successfully performed and a living baby girl, weighing 2,850 Gm. was delivered. A diagnosis of uterus didelphys was then made and the patient was sterilized by a partial salpingectomy.

Semana Médica, Buenos Aires

36: 545-604 (March 7) 1929

Structure of Myocardium and Auriculoventricular Conduction System. P. Rojas.—p. 545.
*Syphilitic Anemia in Early Childhood. A. Casaubón and J. Delucchi.—p. 582.
Vacation Colony for Debilitated Children. E. M. Olivieri.—p. 584.
Semiology of Aphasic Patients. M. Victoria.—p. 586.

Syphilitic Anemia in Early Childhood.—Casaubón and Delucchi studied three cases of syphilitic anemia. One patient was aged 6 weeks and two were aged 2 years. All three patients had marked anemia and rickets. The syphilitic etiology was proved by a positive Wassermann reaction either of the child or of the father. The good results obtained with antisyphilitic therapy confirmed the diagnosis of syphilis. The blood count became normal in two of the children. The serious condition of the third child, who did not improve by diet and residence at the seashore, compelled the authors to resort to mercury rubs, sulpharsphenamine injections and transfusion with whole blood of the mother, which gave good results. Syphilitic anemia in infants does not manifest a pathognomonic symptomatology. The blood count depends on the age of the child, the degree of virulence of the infection and the child's hematopoietic system. But the principal etiologic factor is syphilis, to which other factors (prolonged milk diet, insufficient feeding, acute infections or faulty hygienic conditions) are added.

Archiv für Hygiene, Munich

101: 65-115, 1929

*The 1927 Epidemic of Acute Anterior Poliomyelitis in Free State Saxony. H. Krahn.—p. 65.
Pollution of Lahn River by Marburg. Kapeller.—p. 81.
*Deaths from Accidents in Germany. Tiebel.—p. 95.
*Muscular Strength in Chronic Lead Poisoning. I. M. Ufland.—p. 107.

The 1927 Epidemic of Acute Anterior Poliomyelitis in Free State Saxony.—According to Krahn the total number of cases of acute anterior poliomyelitis reported in the 1927 epidemic in Free State Saxony was 587. The number of deaths was seventy (total lethality of 11.9 per cent). As in the previous epidemics, the largest number of cases occurred in the month of September. Although the morbidity was greatest in children of the preschool age (6.9 per 10,000) and least in adults (0.12 per 10,000), the lethality was greatest in adults (30 per cent) and least in children of the preschool age (9.14 per cent).

Deaths from Accidents in Germany.—Tiebel states that there was a great increase in the yearly number of deaths from accidents in Germany until 1919; since then there has been a definite and steady decrease in the number of such deaths.

Muscular Strength in Chronic Lead Poisoning.—With a specially constructed dynamometer, Ufland demonstrated that in lead poisoning there is a decrease of from 10 to 25 per cent in the strength of various groups of muscles.

Beiträge zur Klinik der Tuberkulose, Berlin

71: 159-256 (Jan. 24) 1929

*Vernes' Resorcin Reaction in Tuberculosis. A. Woldrich.—p. 159.
*Differential Diagnosis of Miliary Tuberculosis. W. Münchbach.—p. 166.
Selection of Tuberculous Persons for Treatment in Institutions. F. Seligsohn.—p. 172.
Spontaneous Pneumothorax in Pulmonary Emphysema. H. Lichtenstein.—p. 183.
*Ferment Substitution in Pulmonary Tuberculosis. P. Groner.—p. 200.
*Effect of Menstruation on Erythrocyte Sedimentation Speed in Tuberculosis. J. A. Langer.—p. 206.
*Tubercle Bacillus Content of Eggs from Tuberculous Hens. Raebiger.—p. 209.
*Alimentary Hyperglycemia and Assimilation of Carbohydrates in Tuberculosis. W. Chlebnikow.—p. 216.

Value of Vernes' Resorcin Reaction in Diagnosis of Tuberculosis.—From a study of serums from 102 tuberculous patients and 100 nontuberculous patients, Woldrich concludes that Vernes' resorcin reaction is not specific. With it positive results are not obtained in cases of tuberculosis until the condition is so far advanced that it can be diagnosed clinically; on the other hand, negative results are obtained in 27 per cent of the cases of tuberculosis in which the diagnosis can be made clinically. It is not of value in the differential diagnosis between tuberculosis and other diseases because it gives a positive reaction in 64 per cent of nontuberculous diseases.

Differential Diagnosis of Miliary Tuberculosis.—Münchbach reports a case of subacute disseminated bronchopneumonia in which the roentgenogram of the lungs showed the same changes that are found in miliary tuberculosis. He believes that many of the cases of so-called healed miliary tuberculosis of the lungs are to be explained on the basis of an incorrect roentgen diagnosis.

Ferment Substitution Treatment in Pulmonary Tuberculosis.—Groner points out that the condition of the digestive organs of the patient is an important and even determining factor in the prognosis in tuberculosis. To combat the insufficiency of gastric and intestinal ferments that is present in most cases of pulmonary tuberculosis, he administers these ferments artificially.

Effect of Menstruation on Erythrocyte Sedimentation Speed in Pulmonary Tuberculosis.—Langer performed the erythrocyte sedimentation test 529 times before and during menstruation in 175 women with pulmonary tuberculosis. He found that normal menstruation does not affect the erythrocyte sedimentation speed; when marked changes in the speed are found which cannot be correlated with the pathologic changes in the lungs, one should not attribute them to normal menstruation but should examine the patient for other disturbances.

Tubercle Bacillus Content of Eggs from Tuberculous Hens.—Raebiger examined microscopically fifty-two eggs from hens with inoculation tuberculosis; of these, nineteen, or 36.5 per cent, were found to contain tubercle bacilli (in the white of the egg fifteen times and in the yolk six times). In 146 culture experiments he found that boiling the eggs for three minutes killed all the tubercle bacilli in the white of the eggs; in order to kill all the bacilli in the yolk of the eggs it was necessary to boil them for at least eight minutes.

Alimentary Hyperglycemia and Assimilation of Carbohydrates in Tuberculosis.—According to Chlebnikow the sugar level of the blood of tuberculous patients in the morning before breakfast has a tendency to rise in subcompensated and decompensated processes and shows no direct relation to the constitution of the patient. The normal course of the assimilation of carbohydrates is frequently disturbed in subcompensated tuberculosis; this disturbance is not accompanied by a change in the level of the fasting sugar value or by decreased tolerance. In studying the assimilation of carbohydrates one should perform tolerance tests not only with dextrose but also with other carbohydrates (mixed diet and usual diet) since the organism reacts differently to different carbohydrates. The coefficient of carbohydrate consumption has proved to be a reliable index of the nature of the course of alimentary hyperglycemia. In tuberculous patients in whom the carbohydrate assimilation is normal, the coefficient of carbohydrate consumption varies from 0.90 to 1.10; in cases of retarded assimilation, on the contrary, it varies from 0.86 to 0.72. The author believes that one should be circumspect in recommending an excess of carbohydrates in the diet of subcompensated tuberculous patients. The fasting value in the terminal stage of tuberculosis does not have a direct, regular relation to the pathologic changes in the organs of internal secretion which play a rôle in the metabolism of carbohydrates.

Beiträge zur klinischen Chirurgie, Berlin

145: 543-723 (Feb. 2) 1929

Empyema of Pleura. E. Melchior.—p. 543.
Treatment of Old Congenital Dislocation of Hip. K. Seiffert.—p. 579.
Peptic Ulcer of Jejunum. H. Hinterstoisser.—p. 594.
Mesenteric Cysts of Stomach. M. Weichert.—p. 599.
Diverticulum of Intestinal Mucosa: Surgical Significance. F. Erkes.—p. 602.
*Hemorrhagic Infarct of Cecum. F. Pendl.—p. 606.
*Lymph Nodes of Common Bile Duct: Clinical Significance. A. Most and J. Severin.—p. 613.
Roentgen Diagnosis of Chronic Appendicitis. G. Woytek.—p. 621.
Appearance of Suprasellar Hypophysis Tumors in Encephalogram. L. Heidrich.—p. 628.
Acute Prostatism with Hypertrophy of Prostate. W. Hirt.—p. 635.
Diverticulum of Urethra. H. Simon.—p. 639.
Le Fort's Method of Dilation of Urethra. H. Kinzel.—p. 642.
Symmetrical Changes in Ureter. O. Einzig.—p. 645.
Renal Calculus: Perforation of Kidney Parenchyma with Formation of Paranephritic Abscess. H. Schlachetzki.—p. 662.
Tumors of Testis. M. Weichert.—p. 664.
Multiple Disturbances of Epiphyses of Hands. Laqua.—p. 670.
Circumscribed Myositis Ossificans. F. Liebig and E. Cordes.—p. 673.
Sarcoma of Forearm. Niewiesch.—p. 689.
Experimental Tar Cancer. W. Koose and E. Cordes.—p. 692.
Postoperative Acidosis. H. Heidecker.—p. 709.
Hypertrophic Capillary Angioma: Removal: Plastic Operation. M. Weichert.—p. 718.
Transplantation of Endocrine Glands by Injection. H. Küttner.—p. 721.
Kidney Surgery: Demonstration of Specimens. H. Küttner.—p. 724.

Hemorrhagic Infarct of Cecum.—Pendl reports one of these cases occurring in a male, aged 41, who had been complaining of gastric disturbances and colic for about one year. Occasionally he felt a severe dragging sensation in the right inguinal region. Suddenly he experienced a severe cramplike pain in the abdomen, which was followed by symptoms of intestinal obstruction. Operation was suggested on the basis of a diagnosis of invagination of the ascending colon. When the abdomen was opened, about 200 cc. of a serosanguineous fluid was evacuated, and an enormously dilated colon and cecum, hard, blue-red and extremely edematous popped into view. The cecum, the ascending colon and a part of the transverse colon were excised, a piece 22 cm. long, and the end of the ileum was implanted into the side of the transverse colon. Three large hemorrhagic infarcts in the wall of the cecum were mistaken for tumor growths until section revealed their nature. The author is of the opinion that embolism or thrombosis of the superior mesenteric artery is the cause of these hemorrhages.

Enlargement of Lymph Nodes of Choledochus.—A case is cited by Most and Severin in which the history and symptoms led to a diagnosis of duodenal ulcer. Operation was performed but ulcer was not found; in fact, except for a slightly enlarged gallbladder, free from adhesions, nothing was found until the search was extended to the common bile duct. Here the accompanying lymph nodes were found to be considerably enlarged. They were removed, and the patient made a complete recovery and was free from any symptoms of distress. Microscopic examination of the lymph nodes failed to disclose malignant characteristics. They were merely hypertrophied. The authors advise searching for these nodes in all cases in which the complaint is referred to this region or when ulcer is suspected.

Deutsche medizinische Wochenschrift, Berlin

55: 469-512 (March 22) 1929

Normal and Pathologic Character Development. E. Kahn.—p. 469.
Reaction Mechanism of Cutaneous Vessels. Bettmann.—p. 474.
*Typhoid Infection Without Immunity Reaction. H. Reiter.—p. 477.
*Blood Pictures During Influenza Epidemic. W. Nipperdey.—p. 478.
Ethylmorphine Hydrochloride and Its Relation to Morphine and Morphine Derivatives. H. Winternitz.—p. 480.
*Therapeutic Influence of Dengue on Organic Diseases of Central Nervous System. G. Pamboukis.—p. 484.

Typhoid Infection Without Immunity Reaction.—Reiter analyzes a typhoid epidemic in a country town. Nine persons contracted typhoid, while six others, who did not show any symptoms of the disease, nevertheless excreted typhoid bacilli. On the assumption that these persons were probably carriers of the bacilli, examinations were made, but the tests always gave negative results. When the serum of these persons was examined in relation to typhoid cultures, no agglutination could be observed. When the agglutination test was repeated about nine months later, the results were again negative. The author assumes that these persons had ingested typhoid bacilli in water. The bacilli increased in number, but some constitutional factor must have prevented a reaction between the microorganisms and the organism of the patient, for they were excreted again without any effect on the carrier. Reiter concludes that these cases represent a special form of silent infection. Silent infection as it is usually understood results in the immunity of the organism. In these instances, however, reactions were not observed.

Blood Pictures During Influenza Epidemic.—During an influenza epidemic Nipperdey studied the hemograms of numerous patients. He observed that the blood pictures show a tendency toward leukocytopenia, aneosinophilia, hypo-eosinophilia and lymphocytosis. They show a certain uniformity which, in spite of the variations in the clinical aspects of the disease, indicates a common etiologic factor; in short, they speak for the existence of a special influenza virus. This virus has so far not been identified. The author thinks that it inhibits the action of the bone marrow.

Therapeutic Influence of Dengue on Organic Diseases of Central Nervous System.—An epidemic of dengue led Pamboukis to the discovery of the therapeutic influence of this fever on organic diseases of the central nervous system. He had the opportunity to observe three patients with organic

nervous diseases such as hemiplegia, paralysis agitans and epidemic encephalitis. One of the patients had been ill several months, while the other two had been suffering for several years. Various remedies had been of negligible influence. During the epidemic all three contracted dengue and after recovery from this disease, it could be observed that the symptoms of the nervous disturbances had more or less disappeared. In one case, however, the improvement was only temporary. The author reasons that the therapeutic effect of dengue is due either to the decrease in the number of leukocytes or to its influence on the vessels. He thinks the latter theory more probable, because two patients with coronary sclerosis and frequent attacks of angina pectoris were free from these attacks during and after the dengue fever. He assumes that the virus which causes dengue has a vasodilator effect. He concludes that dengue may eventually prove to be a valuable addition to the modern fever therapy.

Klinische Wochenschrift, Berlin

8: 529-576 (March 19) 1929

Researches on Carbohydrate Metabolism and on Decomposition of Dextrose Molecule. E. Schneider and E. Widmann.—p. 536.
*Chronic Mercury Poisoning. A. Hertz.—p. 541.
Surgical Therapy of Gastric and Duodenal Ulcers. G. Recht.—p. 544.
*Lactic Acid Content of Blood in Patients with Carcinoma. E. Haintz.—p. 546.
Blood Pressure in Various Diseases: II. Relation Between Blood Picture and Blood Pressure. F. Kisch.—p. 546.
Experimental Psychopathology. E. Joël and F. Fränkel.—p. 549.
Comparison of Kahn and Bruck Tests for Syphilis. H. Gross.—p. 550.
Changes in Kidney Following Administration of Insulin to Patient in Diabetic Coma. T. Weiss.—p. 551.
Diagnostic Value of Interfereometry in Psychiatry. H. D. von Witzleben.—p. 552.

Chronic Mercury Poisoning.—Since Stock called attention to the poisonousness of small quantities of mercury, and particularly to the dangers of dental amalgam, Hertz considered the possibility of mercury poisoning in several patients who either had amalgam fillings or had otherwise come in contact with mercury. Examination of the feces and the urine revealed small amounts of mercury. However, further observation or the removal of the amalgam fillings proved that the diagnosis of chronic mercury poisoning had not been correct. In previous researches, only those persons were examined who had come in contact with mercury. Moreover, Hertz wanted to determine whether poisoning could also be found in persons who had never come in contact with this element. Fifty patients with various diseases were selected for the test. However, only fifteen of these were without amalgam fillings. The author found that of the thirty-five patients who had amalgam fillings, thirty-four excreted mercury in the feces or the urine. In the remaining fifteen patients, mercury was found eleven times. The examinations also showed that the quantity of mercury in the feces was generally larger than that which was found in the urine. In order to determine whether persons working with mercury are subject to poisoning, the author examined thirteen persons who were active in dentistry. In all instances the examination of the feces and the urine revealed mercury. The quantities were somewhat larger than in other persons. However, symptoms of poisoning were not observed in any of them.

Lactic Acid Content of Blood in Patients with Carcinoma.—In order to determine whether the lactic acid content of the blood of patients with carcinoma is greater than in normal persons, Haintz in collaboration with others examined the blood of a patient with cancer of the lip. In testing the blood of the external jugular vein (which gathered all the blood from the cancerous area), they found, that the lactic acid content of this vein was slightly below the average in healthy persons. Examination of the blood of the arm vein showed a considerably higher percentage of lactic acid. The author thinks that this is due to the fact that the cubital vein contains the blood of larger muscles, while in the region of the external jugular vein the muscles are relatively small. It has been proved by exact experiments in vitro that carcinomatous tissues produce large amounts of lactic acid. The author thinks that the reason that it cannot be found in the blood may be either that the cancerous growths are relatively small in proportion to the size of the body or that oxidation decomposes the lactic acid into carbonic acid and water.

Münchener medizinische Wochenschrift, Munich

76: 487-526 (March 22) 1929

Frequency and Prognosis of Lesions of Central Nervous System Caused by Birth Trauma. O. Ullrich.—p. 487.
Diagnosis of Paratyphoid B by Means of Bacteriophages. F. Hoder and L. Heller.—p. 489.
Detection of General Power of Resistance (Alexins) in Blood of Healthy Persons. O. Huntemüller.—p. 490.
Significance of Microscopy of Capillaries in Evaluation of Alleged "Traumatic Neuroses." Goldbeck-Löwe.—p. 491.
*Distribution of Blood Groups in Hyperthyroidism. H. Kraus and C. V. Medvei.—p. 493.
*Progressive Hypertrophic Neuritis. A. von Mellin.—p. 493.
Aphorisms Concerning Treatment of Diphtheria. Lämmerhirt.—p. 495.
*Painlessness of Goiter Operation. Holzer.—p. 496.
Practical Alteration of Truss. B. Capaldi.—p. 496.
Illuminating Box for Observing Roentgen Films and Plates. K. Krause.—p. 497.
Improprieties in Production of Artificial Foods. Von C. Massatsch and A. Schittenhelm.—p. 497.
Etiology and Treatment of Acute Arthritis. Schottmüller.—p. 499. C'cn.

Distribution of Blood Groups in Patients with Hyperthyroidism.—Hermanns and Kronberg had found that among twenty-eight patients with hyperthyroidism, twenty-seven belonged to the same blood group. In order to ascertain whether this observation was of general significance for all cases of hyperthyroidism, Kraus and Medvei determined the blood group of 100 patients with hyperthyroidism. Their tests proved, however, that the distribution of blood groups among these patients was about the same as in normal persons. They conclude that the blood group of an individual is of no significance in ascertaining the constitutional predisposition for hyperthyroidism.

Progressive Hypertrophic Neuritis.—According to von Mellin progressive hypertrophic neuritis represents a special form of progressive muscular atrophy. It is characterized by knotlike thickenings of the peripheral nerves. He compares the cases from the literature, and also gives a detailed description of one case from his own observation. He found that the aspects of the disease are manifold. The knotlike thickenings in the peripheral nerves are similar to those in Recklinghausen's disease. Other authors state that the aspects of the disease are similar to those of multiple sclerosis or to tabes. The patient described by the author, however, apparently was not syphilitic; the Wassermann reaction of the blood and the spinal fluid was negative. The author comes to the conclusion that the essential nature of progressive hypertrophic neuritis is not completely clear.

Painlessness of Goiter Operation.—It is pointed out by Holzer that local anesthetics frequently fail in goiter operations. In 130 goiter operations which he performed during the last three years, he employed a combination narcosis which was successful in all cases. His technic is as follows: After the paravertebral anesthesia, injections are made around the field of operation. Following this, light ether narcosis is given. In order to prevent deeper narcosis, the mask may be removed temporarily. When the sutures are inserted, a little more ether may be given. According to the author this method of anesthesia has the advantage that it makes the operation painless, and at the same time avoids the bad after-effects of a general narcosis.

Wiener klinische Wochenschrift, Vienna

42: 353-384 (March 21) 1929

Somatic and Autonomic Innervation. L. Hess.—p. 353.
*Paraldehyde Poisoning. P. Schneider.—p. 357.
*Surgical Treatment of Acute Localized Phlebitis of Lower Extremity. I. Eisenklamm.—p. 360.
*Physical Therapy of Skin Diseases. H. Fuhs.—p. 361.
Epidemic Encephalitis and Subacute Diffuse Encephalomyelitis (Cruchet). C. Economo.—p. 366.
Diphtheria Bacilli in Male Urethra. J. Wendlberger.—p. 368.
Benzidine Reaction in Urine. Boas.—p. 368.

Paraldehyde Poisoning.—Schneider points out that only comparatively large quantities of paraldehyde cause poisoning. He cites cases from the literature in which 75 Gm. taken by a patient did not lead to poisoning, while in another instance 50 Gm. caused a fatality. On account of the contradictory results of postmortem examinations after paraldehyde poisoning, and in order to determine what changes are caused by this poison, the author made several experiments. He describes the changes which paraldehyde effects in excised portions of the wall of the stomach. These portions were from patients who

had undergone resection on account of ulcers. In order to study the influence of paraldehyde on the mucous membranes in the living organism, he made experiments on dogs. He found that the changes due to paraldehyde poisoning are mainly a loosening and swelling of the mucous lining of the stomach with gradual solution of the surface tissues. A corrosive influence of the paraldehyde or a hardening of the mucous membranes was not noted. In the living organism there was an increased secretion of mucus. Changes were also observed in the upper portion of the intestine, which indicates that the poisoning was rapidly discharged from the stomach into the intestine. The author also noted injury of the liver cells.

Operative Treatment of Acute Localized Phlebitis of Lower Extremity.—Eisenklamm reviews sixty-six cases of localized phlebitis of the lower extremity, which were cured in a comparatively short time by operative treatment. The ages of the patients ranged from 20 to 71 years. Fifty-three of them were women and only thirteen were men. The author states that in cases of progressive ascending phlebitis an operation is often dangerous. In all other cases, however, surgical treatment gives the best results. It is advisable to perform the operation under light narcosis. In the diseased area incisions of from 1 to 2 cm. are made, following the fissures of the skin. The distance between them is generally about 5 cm. Their number varies in the different cases. The thrombi are removed with a spoon but without pressure or scraping. Ligature of the part of the vein that is not thrombosed is not necessary. Since the small incisions are made in the direction of the fissures of the skin, sutures are likewise not required. The author asserts that in twenty-eight cases which were not complicated by suppurative processes, the patients could be dismissed from eight to eleven days after the operation. The majority of the other patients could leave the hospital about eighteen days after the operation. Only in a few exceptional cases did the postoperative treatment require more than twenty-two days. The main advantages of the operative treatment as compared with the methods formerly employed are that it requires a much shorter time and prevents the otherwise frequently occurring relapses. The surgical treatment is therefore not only symptomatic but also prophylactic.

Physical Therapy of Skin Diseases.—Fuhs calls attention to the recent additions to the numerous methods of physical therapy. He enumerates particularly the advantages and disadvantages of diathermy and of Bucky's rays, in the treatment of various skin diseases.

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53: 705-768 (March 23) 1929

*Death in Hyperemesis Gravidarum. H. Rupp.—p. 705.
*Early Sign of Threatened Death of Fetus in Protracted Gestation. C. Holtermann.—p. 711.
*Dienst Test for Early Diagnosis of Pregnancy. W. Witte.—p. 718.
*Tumor of Mesentery During Pregnancy. W. Schmitt.—p. 719.
*Autoplastic Ovarian Impiants. F. Michel.—p. 723.
Advantages of Sellheim's Operation. A. Paunz.—p. 726.
Fibro-Adenoma in Laparotomy Scar. F. Legerlotz.—p. 744.
Surface Tension and Viscosity of Blood Serum in Gynecologic Diseases. A. W. Hochloff.—p. 748.
Rectal Tribromethanol Anesthesia in Gynecologic Operations and in Labor. E. Rumpf.—p. 751.

Death in Hyperemesis Gravidarum.—Rupp reports a case of hyperemesis gravidarum in which the patient died in spite of the fact that she was kept in a good state of nutrition (with only slight loss of weight) by means of nutrient enemas and infusions of sodium chloride solution. The author believes therefore, that the patient's death was caused not by inanition or dehydration but by a toxicosis.

Early Sign of Threatened Death of Fetus in Protracted Gestation.—Holtermann states that the intra-uterine death of a postmature fetus is preceded by attacks of true, transient fetal arhythmia. These attacks of arhythmia are to be considered as an early sign of threatened intra-uterine death of the fetus. They appear during pregnancy or labor and may be accompanied by a decreased rate of the fetal heart beat. The appearance of fetal arhythmia in protracted gestation indicates that the life of the fetus is endangered and that labor should be induced as quickly as possible.

Dienst Test for Early Diagnosis of Pregnancy.—In one of two healthy women and in four healthy men, Witte obtained a positive reaction for pregnancy with the Dienst test. He believes that a positive Dienst test is not even a probable sign of pregnancy.

Tumor of Mesentery During Pregnancy.—Schmitt reports a case of tumor of the mesentery in a woman in the fifth month of pregnancy. At operation a cavernous hemangioma the size of a child's head was removed together with a segment of the small intestine 75 cm. long; a lateral anastomosis was performed and the patient made an uneventful recovery. The pregnancy was not disturbed by the operation and five months later the woman gave birth to a normal child.

Autoplastic Ovarian Implants.—In cases of bilateral, suppurative diseases of the adnexia in which it is not possible to remove the oviducts without removing the ovaries, Michel cuts off a piece of one of the resected ovaries, washes it and sutures it to the uterus just below the point of attachment of one of the round ligaments. A fold of the round ligament is then drawn over it and fixed in place. The author believes that intraperitoneal implantation of a portion of an ovary is more effective than extraperitoneal implantation for combating the disturbances produced by a loss of ovarian function. He obtained good results in six out of seven cases in which he used his method of autoplastic implantation of a portion of an ovary.

Hospitalstidende, Copenhagen

72: 55-82 (Jan. 17) 1929

*Two Cases of Embolectomy. J. Nordentoft.—p. 55.
Paroxysmatic Myoplegia (Periodic, Familial). A. V. Neel.—p. 61. Cont'd.

Two Cases of Embolectomy.—Nordentoft says that in his first case, the incision was much too long; had he realized that there was marked pulsation of the embolus as well as of the blood stream, an incision half as long would have sufficed. His second case illustrates that with an embolus located where large branches leave the artery, it is absolutely necessary to have arterial forceps in readiness on the branches in case of more violent bleeding from them. The embolus removed in this instance was of great firmness with the cylindric central portion 2.5 cm. long, divided at the peripheral end into two branches each 1 cm. long, the one forming a cast of the superficial femoral, the other of the deep femoral and the central portion of the common femoral.

72: 139-164 (Feb. 7) 1929

Proof of Presence of Vitamin A in Retina. E. Holm.—p. 139.
*Acrocephalosyndactylia in Brother and Sister. J. Nørvig.—p. 153. Cont'd.

72: 165-192 (Feb. 14) 1929

*Acrocephalosyndactylia in Brother and Sister. J. Nørvig.—p. 165. Cont'd.
Lederer's Anemia. T. Christiansen.—p. 178.

Acrocephalosyndactylia in Brother and Sister.—Nørvig says that forty cases of acrocephalosyndactylia have been reported to date. His cases, classified as Apert's acrocephalosyndactylia, in brother and sister, both adults, are marked by characteristic cranial abnormality, syndactylia and polydactylia. Roentgen examinations show changes in other parts of the skeleton. There is slight imbecility. Genital hypoplasia appears in one case. Sexual life seems to be normal in both. Three other children of the same family who died in infancy in all probability also had acrocephalosyndactylia. The condition is believed to be hereditary. In a note an additional case is cited.

Hygiea, Stockholm

91: 113-160 (Feb. 28) 1929

Tetanus. W. Möller.—p. 116.
*Some Symptoms of Myocarditis. J. Tillgren.—p. 132.
Guttadiaphot Test. E. B. Salén and C. E. Hæggström.—p. 138.

Some Symptoms of Myocarditis.—Tillgren reports cases illustrating dyspnea and hypotonia. He emphasizes the importance of electrographic and roentgen examination in the diagnosis of cardiac insufficiency and considers roentgen examination of inestimable value in the differential diagnosis between myocarditis and cardiac neurosis, in the prognosis in infectious cases, and in intended operative intervention. While the relation between hypotonia in older persons of powerful stature and cardiac weakness is uncertain, he believes that the observation in series of low blood pressure values and reductions in blood pressure is of greater importance than it is usually considered to be.